

6215
1963/07/25/53

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By **GEORGE F. TAUBENECK**

Story of the Week
Write Your Own Comment
Wit's End
Elusive Elucidation
Food for Thinking
Any Arguments?

Story of the Week

Saddest time of the year for sports-writers and fans is the period between early January and mid-April. No football, no baseball. Little of anything.

Sports pages usually strain for excitement then—which is why the long rumored and often delayed marriage of Joe DiMaggio to Hollywood's reigning doll, Marilyn Monroe—received so much ink in the nation's press.

Many were the journalistic grins involved, conscious and otherwise. The *Newark Star-Ledger* reported: "Miss Monroe arrived with the man who rose from San Francisco's sandlots to baseball's immortality. And the *Longview* (Tex.) *Journal* headlined: "Sluggo Goes Down Swinging—Curves Got Him."

Jimmy Cannon of the *New York Post* columned: "Well, it's better than rooming with Joe Page."

And scout Pat Monaghan observed: "Joe knows good curves when he sees them."

Everyone, incidentally, was happy for them.

Write Your Own Comment

"I wish to take this means of thanking the tax-paying citizens for constructing a lake on my ranch at Watrous, increasing the value of the property.

"I have just received authorization of payment of \$474.10 from the government, under the PMA (Production and Marketing Administration) program, which sum was received for improving facilities at my ranch—something which I no doubt would have done myself.

"Next year, I am informed, I will be entitled to a payment of \$2,500 for continued government-approved practices on my ranch property.

"I regard the government's interest in my ranch as a profitable enterprise.

"I would like to remind you taxpayers that this expenditure is necessary, because the President himself has said that he has cut the budget to the bone, leaving only essential expenditures.

"Again, thanks, taxpayers—although you might not realize you are making this windfall possible."—**BILL PORTER**, Watrous, N. M. (Advertisement in Las Vegas, N. M., *Daily Optic*).

Wit's End

A new tax proposal was advocated at the 45th Annual Conference of the National Tax Association. With tongue in cheek, J. B. McGeachy told delegates that a glass of whiskey means a great deal more to a 20-year-old man than it does to a 50-year-old individual.

Mr. McGeachy proposed that a graduated tax be placed on whiskey. A glass of spirits, tax included, would cost a 20-year-old individual 75 cents. This then should be reduced a nickel each five years.

"It requires only simple arithmetic," he said, "to see that at age 95 you would be drinking free. Think how much better that would be than social security. It gives you something to look forward to in your old age."

He doesn't plan to patent his idea. Any government would be free to use it. But if it's adopted he asks that it be known as "The McGeachy sliding scale for hardened spirits," or, in the alternative, "The slippery slope to a happy old age."

Elusive Elucidation

Dr. Samuel Johnson did a neat job of explaining why traitorous Communist and Socialist propaganda doesn't come under the heading of "free speech." In *Boswell's Life of Johnson* we read:

(Concluded on Page 8, Column 1)

ISSUED EVERY MONDAY AT 450 W. FORT ST. DETROIT 26, MICHIGAN ESTABLISHED 1926.

AIR CONDITIONING & REFRIGERATION

THE NEWSPAPER OF THE INDUSTRY

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Proposed Federal Safety Law Gets Cool Reception

WASHINGTON, D. C.—Proposed Federal legislation that would require inside latches on refrigerator, home freezer, and ice box doors, to permit them to be opened by anyone trapped inside, is not being greeted with much enthusiasm by manufacturers.

The proposed legislation, introduced by Sen. Mike Mansfield (D. Mont.), would apply to any refrigerator, ice box, ice chest, or home freezer of at least 1½-cu. ft. capacity shipped in interstate commerce, and would become effective six months after enactment. Maximum punishment for violations would be \$1,000 fine, a year in prison, or both.

The general reaction of the industry is that the proposed legislation offers no satisfactory solution to the problem of "ice box deaths" of children who lock themselves inside of abandoned refrigerators and ice boxes.

Points made against such legislation are these:

1. The big hazard lies in the mil-
- (Concluded on Page 4, Column 1)

Nash-Kelvinator, Hudson Stockholders To Vote On Merger March 24

DETROIT—Nash-Kelvinator Corp. directors voted recently to call a special stockholders' meeting March 24 to vote on a merger of Nash-Kelvinator and Hudson Motor Car Co. under the name American Motors Corp. Only stockholders of record Feb. 23 may vote.

The merger plan, as approved by the boards of directors of the two companies on Jan. 14, 1954, provides for issuance of two shares of American Motors \$5 par value capital stock in exchange for three shares of Hudson stock presently outstanding. Nash-Kelvinator stockholders would participate in American Motors on a share for share basis.

Approval of the merger plan requires an affirmative vote by two-thirds of the stock of each company. Hudson stockholders are also scheduled to meet March 24 to vote on the merger.

Bullock Heads Sales of Two Mitchell Divisions

CHICAGO—Appointment of John Bullock as sales manager of the air conditioning and high fidelity divisions of Mitchell Mfg. Co. was announced recently by E. A. Tracey, the company's vice president in charge of the air conditioning division.

Bullock has had wide merchandising experience in the major appliance field. He was formerly associated with Zenith Radio Corp. and

(Concluded on Page 4, Column 1)

Heavy Attendance Seen at National Restaurant Show

CHICAGO—Demand for hotel rooms indicates there will be a "very large" attendance of restaurateurs at the 35th National Restaurant Convention and Exhibition, the National Restaurant Association reported recently. The show will be held May 10-14 at the Navy Pier here.

'53 Commercial Refrigerators New Line 11.4% Above '52, CRMA Report Says Fronts to 36 In.

CHICAGO—Sales of commercial refrigerators in 1953 by its members exceeded the 1952 total by 11.4%, the Commercial Refrigerator Manufacturers Association has revealed to its members in a recent "state of the industry report."

The report pointed out that 1953 was the second best year in history, being topped only by 1950. It was estimated that 60% of the total volume last year was produced by self-service or open-type models.

A survey of the plans and opinions of the individual member manufacturers showed that each expects an increase in 1954, averaging about 10% for the group as a whole. Pronounced shifts in population, as well as continued growth of the national population, together with obsolescence of much equipment now in use were among the reasons advanced for the general feeling of optimism.

Several manufacturers expect to add to their existing plant facilities, up to 25% of present capacity, the report also stated. A majority of commercial refrigerator manufacturers, it was disclosed, plan to increase their former budgets for advertising and sales promotion materially, as well as adding to their present staffs of supervisory and selling personnel.

"Among manufacturers who contributed to the over-all 11.4% improvement over 1952 was one with a net boost of 38%, and another whose sales rose 23.3%. Nearly a scale of others reported increases to help offset the below-average records of the small minority.

Final Plans Set for Canadian Show

TORONTO, Can.—With final plans for the First Canadian Refrigeration and Air Conditioning Show about complete, the affair seems a certain success with some 65 exhibitors taking 150 exhibit spaces.

The show will be held Feb. 23, 24, and 25 at the Coliseum, Exhibition Park, Toronto, under the sponsorship of the Canadian Refrigeration Manufacturers Association. H. S. Parish is secretary-manager of the show, with headquarters in Suite 1209, 137 Wellington St., W. Toronto.

The show hours are from 12 noon to 9 p.m. for all of the days it is open. Admission on Tuesday and Wednesday, Feb. 23-24, will be limited to those with a legitimate interest in refrigeration and air conditioning. On Thursday, Feb. 25, the show will be open to the public.

Attendance by the public is being promoted with a special advertising

(Concluded on Page 29, Column 3)

Discount Merchants Form Own Assn.

NEW YORK CITY—Figure this one out if you can: a National Association of Discount Merchants has been established here, and one of the first items on its program is the establishments of a "code of ethics" for discount stores!

Herbert Greenberg, an attorney located at 551 Fifth Ave., New York, is apparently the guiding light of the organization, which held a meeting recently at the Waldorf-Astoria hotel.

In addition to developing a code of ethics, the association will try to combat bad publicity and will try to get other businessmen and the public to other referring to them as "chiselers" and "bootleg operators."

SOUTH BEND, Ind.—Unveiling an "entirely new and different" line of refrigerated open "sales-cases," Tyler Refrigeration Corp. revealed that it has lowered the height of the case fronts from the customary 42 in. to 36 in. and eliminated all front glass.

Also, the new line is narrower while maintaining the same cubic foot capacity and it offers new economy in operation due to important reduction of required condensing unit capacity and other features, according to Robert L. Tyler, president.

The company's open meat, frozen food, produce, and dairy cases were introduced at a three-day international sales meeting held here recently.

The new height of the case fronts is based on a study which indicated that 36 in. conforms with the natural bending height of the average woman shopper, Tyler said. The lowered height was achieved, he added, after Tyler engineers successfully worked out solutions to the refrigeration problems which enabled them to dis-

(Concluded on Page 4, Column 4)

G-E Consumer Sales In January Close to '53

DETROIT—While General Electric Co.'s net sales in January of this year fell below the January, 1953 figure, sales of G-E consumer goods for the month were about even with the same period in 1953, according to statements made at a press conference here by George P. Park, manager of advertising and sales promotion services for G-E.

Refrigerator and room air conditioner sales were bright spots in the consumer goods picture, it was stated, along with small appliances. Radio and TV and washers declined slightly from last year. Major decline came in sales of industrial equipment.

However, Park said that G-E officials were generally optimistic and saw considerable firming of business in all fields.

Luke Succeeds Rees as President of Coolerator

DULUTH, Minn.—Stanley Luke has been appointed president of Coolerator Co., it was announced recently by W. H. Harrison, president of International Telephone & Telegraph Corp. of which Coolerator is a division.

Gregory L. Rees, former president of Coolerator, will join the IT&T headquarters staff. Luke, an assistant vice president of IT&T, has been associated with the corporation since 1945, during which time he has held various executive positions in the parent company and its subsidiaries, both in the United States and abroad.

Beresford, Coolerator's Sales Director, Resigns

DULUTH, Minn.—H. C. Beresford, director of sales and advertising of Coolerator Co., has resigned.

Beresford joined Coolerator in 1950 as manager of advertising and sales promotion. He has been director of sales and advertising since January, 1952.

St. Louis Utility States Its Case On Room Units

Memo Discusses 'Correct' Circuits; Asks Boost In Power Factor by 1955

ST. LOUIS—"All room air conditioning units in excess of ¾ hp. should be connected to 240-volt (or 208-volt) circuits. Units of ¾ hp. and smaller may be connected to 120-volt circuits provided they are designed so that the starting inrush currents do not exceed 46 amperes for manually controlled units or 23 amperes for automatically controlled units."

So states a memorandum issued by the Union Electric Co. of Missouri, utility supplying power to the St. Louis area, which memorandum has just been issued for the "guidance" of air conditioning distributors and dealers. The utility points out that it is not intended to "replace instructions issued by manufacturers" or "supersede any utility regulations or inspection ordinances which may apply in certain areas or municipalities."

The memorandum also cites the need for improved power factors in room air conditioners, stating that "many room air conditioners now on the market have power factors of 70% or less. The growing use of these low power factor room air conditioners is resulting in needlessly overloading customer's and company circuits and facilities and is resulting in low voltage conditions at the unit which give rise to customer dissatisfaction."

The St. Louis utility cites a company service room which requires their customers to install, at their own expense, apparatus to correct "objectionable conditions" arising from a low power factor, and notifies manufacturers that air conditioning units with full load power factors below 90% do not fall within these service requirements. However, the

(Concluded on Page 11, Column 1)

70 Plan Exhibits at ARI Conference In Long Beach Mar. 11-13

WASHINGTON, D. C.—The number of firms which will have educational exhibits at the ARI Educational Conference on commercial refrigeration and air conditioning March 11-12-13 at the Municipal Auditorium in Long Beach now totals 70.

This was revealed last week when the Air-Conditioning and Refrigeration Institute revealed the names of those firms which have signified their intention of exhibiting. The ARI sponsors the Educational Conference and exhibits.

Speakers at the conference sessions will discuss educational problems, and there will be programs held by the Refrigeration Equipment Wholesalers Association, the Refrigeration and Air Conditioning Contractors Association, and the Refrigeration Service Engineers Society which will

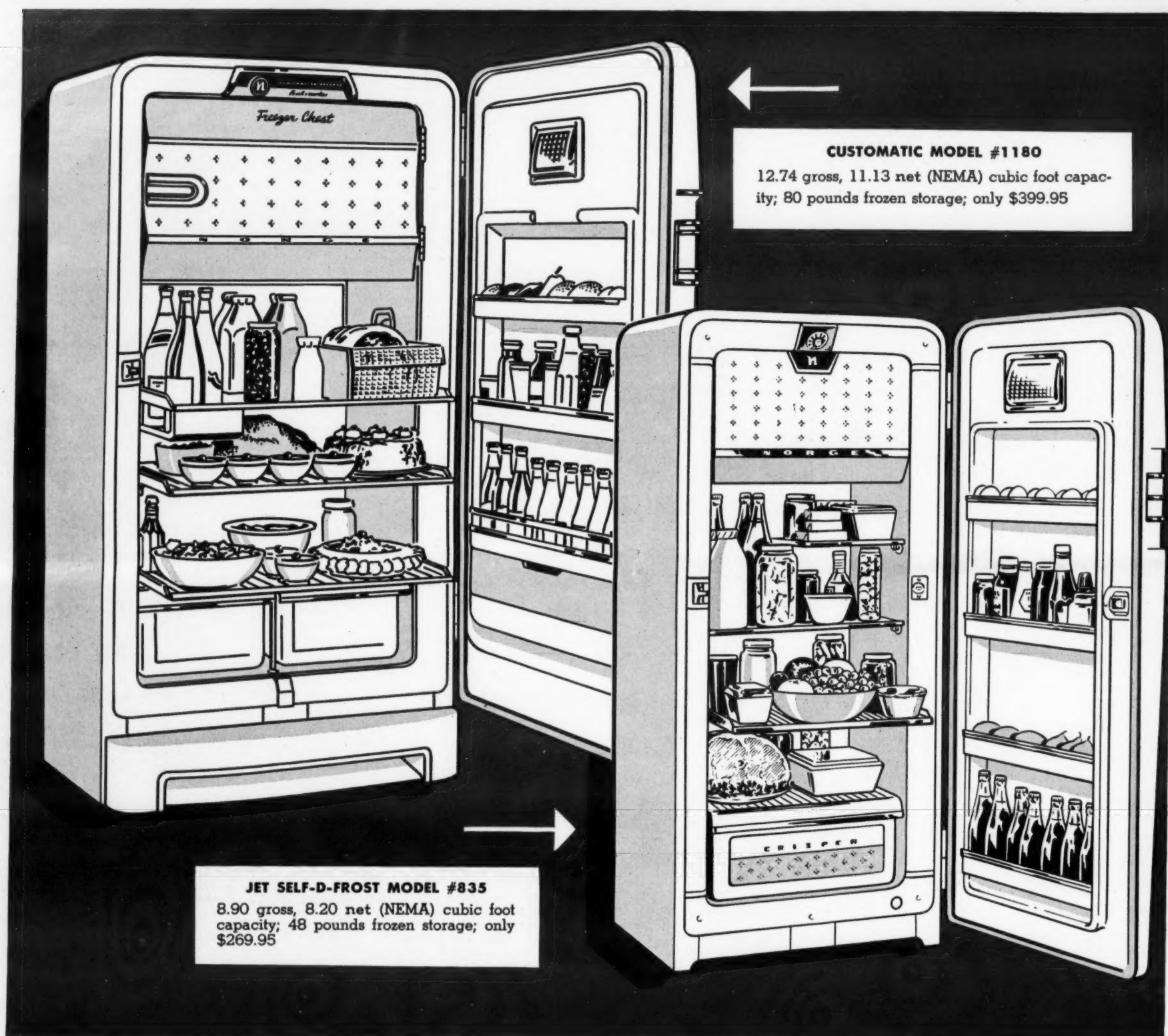
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THE MOST EXCITING REFRIG

'54 NORGE "CUSTOMATIC" REFRIG



CUSTOMATIC MODEL #1180

12.74 gross, 11.13 net (NEMA) cubic foot capacity; 80 pounds frozen storage; only \$399.95

JET SELF-D-FROST MODEL #835

8.90 gross, 8.20 net (NEMA) cubic foot capacity; 48 pounds frozen storage; only \$269.95

**NOT A RESTYLED OLD REFRIGERATOR
BUT A TOTALLY NEW APPLIANCE WHICH MAKES
EVEN THE MOST MODERN REFRIGERATOR OBSOLETE!**

NORGE ... *just the best in home appliances!*

DIVISION OF BORG-WARNER . MERCHANDISE

THE MOST EXCITING REFRIG

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12.74 gross, 11.13 net (NEMA) cubic foot capacity; 80 pounds frozen storage; only \$399.95

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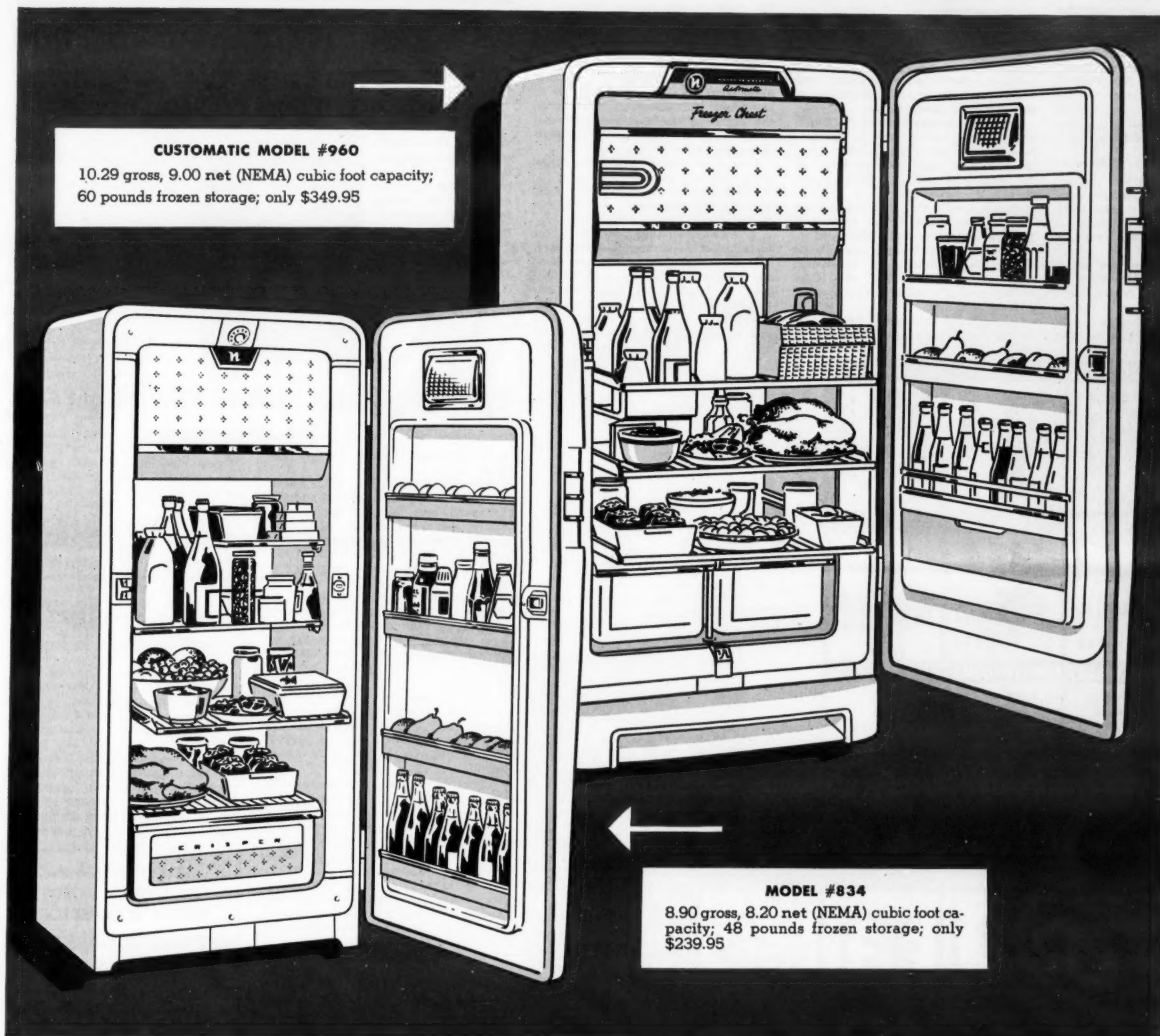
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8.90 gross, 8.20 net (NEMA) cubic foot capacity;
48 pounds frozen storage; only \$239.95

- The *shortest* line with the *longest* sales reach. Only four models cut down inventory requirements, step up turnover rate.

- Meets growing consumer demand for separate zero-cold freezer compartment. Holds *large quantities* of frozen foods.

- Offers *all 7* features women want most: 1. Giant Freezer 2. Moist Cold 3. Automatic Defrosting 4. Butter Bank 5. Roll-out Shelves 6. Handi-dor Shelves 7. Egg nest.

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MART, CHICAGO 54, In Canada: ADDISON INDUSTRIES, TORONTO



Safety Proposal--

(Concluded from Page 1, Column 2)

lions of such products now in use and being junked and abandoned daily. Efforts of industry groups, and some state and municipal legislation, have been directed towards the removal of doors and latches on refrigerators left in places where children might find them.

2. The feeling that there is no assurance that equipping such products with inside latches would be a positive safety factor. A small child trapped inside a refrigerator might be in such a state of panic that he wouldn't make use of the safety device.

3. Legislation forcing manufacturers to change their door and hardware design in a relatively short time would pose production problems and would assuredly necessitate increased prices. Many manufacturers are of the opinion that safety latches will be developed in the course of time, without adding to the cost of the product.

Bullock Appointed--

(Concluded from Page 1, Column 2)

was branch manager for the Chicago factory operations of Hallicrafters. He also served as eastern sales manager for Majestic Radio & Television Corp. and as national sales manager for Hallicrafters.

Bullock will supervise the activities of 70 salesmen in Mitchell's air conditioning and high fidelity divisions. In addition he will travel extensively, working closely with the company's distributors and dealers.

Air Conditioning Becoming 'Must' To Get, Keep Tenants In Older Offices

ATLANTA—To keep their premises at full occupancy, the owners of older office buildings are just about forced to install air conditioning, believes G. R. Bilderback of Advanced Refrigeration, Inc. here.

With all new office buildings installing air conditioning as a "must" at the time of construction, managers of the older buildings are finding that they have to follow suit in order to keep their tenants—or get new ones even willing to take short-term leases.

For some building owners, the addition of air conditioning is an extremely difficult proposition, for their buildings were never designed to accommodate it.

One solution for those who find it impractical to air condition the entire structure is to add cooling floor by floor.

An example is a recent installation made by Advanced Refrigeration in the Healey building here.

When the fourth floor of the building became vacant, the prospective new tenant—the Retail Credit Co.—insisted that the management air condition the 200 by 50-ft. space before it moved in.

Retail Credit Co. was sold on air conditioning when it was located in the Volunteer building. There it installed 14 ½-ton window units in its office space, making an agreement with the landlord that the latter would keep the units when the company moved out.

So, when the company outgrew its Volunteer building quarters, it looked

around for larger space—air conditioned space.

To get this new tenant—on a five-year lease only—the Healey building management decided to air condition the fourth floor.

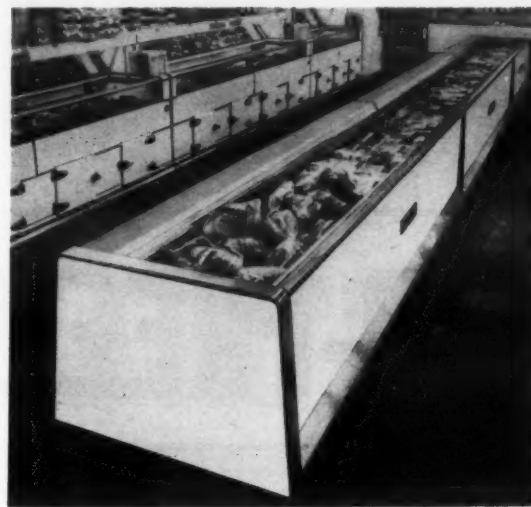
Granted the contract, Advanced Refrigeration installed 30 tons of air conditioning—six 5-ton hermetically sealed model HC552 York compressors. The whole system was enclosed in a single sealed circuit, Bilderback explained, with compressor, condenser, and tubing all covered by a five-year warranty.

All units are ducted together to a single 12,000 c.f.m. blower made by American Blower Co. and rated at 300LP-utility set, 7½ hp.

This system, along with two 15-ton Marley cooling towers, is all located on the fourth floor in a machinery room back of the elevator shaft at the center of the building. From the blower unit, ducts run to the front and the rear, right down the center of the floor, with air distribution grilles opening at intervals along the sides of the duct.

Two short ducts feed conditioned air to the only enclosed offices on the floor. These are in the center right opposite the elevators. All the rest of the floor is open office space.

A forward-looking feature of the installation, according to Bilderback, was the installation of the duct down the center of the floor. With the duct so located, he explained, the building owner can later divide the floor into a number of closed offices and be able to provide cooling to all.



NEW TYLER ISLAND SALES-CASES for frozen food or fresh meat give 4-side protection against cart and lift truck damage, along with toe recesses for added customer shopping convenience. (Note former Tyler line of frozen food cases in background.)



NEW, LOW 36-IN. HEIGHT of Tyler open sales-cases conforms with natural bending height of average woman shopper; enables her to reach any part of display easily without strain.

Tyler Sales-Cases Feature New Height--

(Concluded from Page 1, Column 4)

card the glass barrier at the case front. Tyler stated that the 36-in. height enables the average woman shopper to reach any part of the display easily and comfortably, permitting faster selection and self-service buying from the front—as well as display loading from the rear for the clerk.

Elimination of all front glass not only provides unobstructed view of all the merchandise in the case, but also represents a new economy by ending glass cleaning, heat loss, and replacement of broken glass barriers, Tyler said.

Stating that the new cases are narrower while maintaining the same cubic foot capacity, he pointed out that the reduced dimension permits any single case to be easily moved through a 42-in. door.

Tyler sales-cases are available in 8-ft. and 12-ft. display lengths for continuous or single-unit installations. It was noted that whereas the term "12-ft. case" formerly designated the over-all length, it now refers to 12 ft. of interior display length.

The new open meat and frozen food sales-cases are being made for island use with porcelain fronts on two sides, and provide "new four-side shopping accessibility."

On cases where rear storage is provided, Tyler continued, the storage compartment has been shifted to convenient height by lowering the coils to the bottom of the case.

"New, slide-out racks in the compartment eliminate bending and squatting," it was reported. "Sliding doors save floor space and prevent accidents. Toe recess at the back of the cases, as well as front, permits close, fast work by the clerk."

"And, in order to assure fast installation and service, coils, valves, drains, and connections are concentrated in one, easy-to-reach area."

Complete re-styling of the new line by Sheldon Rutter, noted industrial designer, is marked by stripping of all non-essential decorative trim in order to provide essential functional

value and to project maximum customer attraction to the merchandise.

Tyler also pointed out that the term "display cases," derived from the days when meats and other perishables were displayed in glass-enclosed service cases, "does not characterize these modern, open self-service merchandising cases." Therefore, he said, Tyler will refer to the new equipment as "sales-cases."

Jentis Manages Thor Contractor Dept. In East

CHICAGO—Thor General Sales Manager Thomas R. Chadwick has announced the appointment of Irving M. Jentis as manager of the contractor department for the eastern division.

Jentis, headquartered in New York, will assist eastern distributors in the sale of Thor products to builders and contractors and in setting up sales organizations for the distribution of the Thor built-in electric range line.

AIR CONDITIONING EXTENSION CORDS WIRE & CONNECTORS

LOW-PRICED

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SALESMEN: MOST TERRITORIES OPEN



FLO-COLD Stainless Steel DRINKMASTER ICE CUBER-COOLER

Now Also Made in ALUMINUM

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Curtis
REFRIGERATION
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COMMERCIAL

Packaged Air Conditioning Units
2 to 15 Tons
Condensing Units
1/4 hp. to 40 hp.

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THERMO EXPANSION VALVES

TYPE 402 with pressure limiting feature

TYPE TK "3 valves in 1"

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TYPE S1

TYPE S2

TYPE M3

TYPE R2

FLOAT VALVES AND SWITCHES

TYPE J5 electric float switch

TYPE HK high pressure float valve

908 LECTRO-LEVEL electronic remote control of liquid level

AMMONIA CONTROLS

TYPE M91F

TYPE TG

TYPE UG

TYPE TX

TYPE E with Strainer

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TYPE EPR

TYPES 771-772 SUCTION PRESSURE REGULATORS (HOLD-BACK VALVES)

TYPE 760 "EVAPOTROL"

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ALCO ALSO MAKES: Constant Pressure Expansion Valves - Liquid and Suction Line Strainers.



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Room Cooler Dealers, Distributors Urged To Work with Banks

BUFFALO—Distributors and dealers in air conditioning products must have the active support of financial institutions in their territories if they are to take full advantage of the tremendous potential market in 1954.

This was the theme of a recent series of addresses before Fedders distributors throughout the country by Donald C. Jackson, manager of the Sales Finance Div., Fedders-Quigan Corp.

"You have heard a great deal about credit being tight and that it is difficult to obtain financing," Jackson said. "It certainly is true that bank loan portfolios are bulging and banks are no longer beating at your door for business."

BANKS INTERESTED IN YOU

"However, I firmly believe that all financial institutions are vitally interested in doing a constructive job for manufacturers, distributors, and dealers."

"They are interested in listening to the distributors' and dealers' story and, I believe, they will continue to play a very important role in inventory and consumer financing," he said.

"Banks are interested in seeing your distributorship, so invite them to your meetings so they can learn first-hand your merchandising methods and something about the products you sell."

"They will appreciate knowing that you are working with your dealers to generate a good class of contracts and to see that dealers give customer service and satisfaction."

"These things are important to your bank. They are also important to you," Jackson explained.

"So my message to you is to work closely with your banks and finance companies and ask them to arrange financing for your dealers."

"If you have dealers who do not have flooring lines or means of selling the paper they generate from retail sales, go with them to the banks and do everything you can to get them proper financing."

BANKS LIKE ROOM COOLERS

"This will not be a hard thing to do for when it comes to making arrangements for room air conditioner financing you will find the financial institutions enthusiastic about this paper."

"I have recently made a survey and it was gratifying to note that our products have been most favorably received. Because of their favorable experience, banks are now very agreeable about financing the sales of room air conditioners."

"It really means a lot when you have the banks on your side. Don't let them down, cooperate with them in every way and you will be surprised with the job they will do for you. The contracts you make will do only one thing for you, they will increase your sales."

Jackson has had 15 years' experience in the consumer credit field. He has held positions in the consumer credit departments of the Iowa-Des Moines National Bank, Bank of America, Pacific Finance Corp., and The Morris Plan Co. of California.

He was vice president of the Bank of Denver just prior to joining Fedders last year and is now manager of Fedders Sales Finance Div.

Prudential Distributors Handle RCA In Spokane

CAMDEN, N. J.—Prudential Distributors, Inc. has been appointed distributor of RCA and RCA Victor consumer products in the Spokane, Wash. trading area, it was announced recently by J. B. Elliott, executive vice president, Radio Corp. of America.

The Spokane trading area includes eastern Washington and northern Idaho. RCA and RCA Victor products formerly were distributed in this area by Harper-Meggee, Inc., which is discontinuing business.

Prudential Distributors has distributed major appliances for eight years. Officers of the company are Bedri Saad, president; Davis S. Cohn, vice president, treasurer, and general manager; and Bernard Swerland, secretary.



G. P. KENNEDY



C. P. MARTIN

Norge Sets Up Dept. To Develop New Appliances; Kennedy Named Director

CHICAGO—Creation of a Central Research and Product Development Dept. to develop new home appliances was announced recently by Norge Div. of Borg-Warner Corp.

The department, headquartered in the division's Muskegon Heights, Mich. plant, will be headed by G. P. (Pat) Kennedy as director of re-

search, according to S. S. Battles, vice president in charge of manufacturing and engineering.

Kennedy, formerly Muskegon Heights plant manager, will be succeeded by C. P. Martin, manager of manufacturing for the past two years. K. E. Anderson, formerly assistant to the manager of manufacturing, will become assistant plant manager.

The new department will concentrate on developing home appliances for Norge's already established distribution channels. It will also conduct research and development work on new materials and manufacturing methods for improved appliances at lower cost.

Basic research facilities at Borg-Warner's Bellwood, Ill. laboratories, will continue to assist Norge engineers.

Complete engineering facilities of the Muskegon Heights plant will be available for the department, including drafting rooms, chemical and metallurgical laboratories, model shop, and sample room.

The department will work with sales and manufacturing personnel in selecting specific products to be

investigated and will develop these products to the production stage, Battles said. A project engineer will be appointed to supervise each product in the development stage.

Norge's new director of research has been with the division since 1931 and in the refrigeration business since 1920, when he was moved from General Motors' research department to help produce the newly-acquired Frigidaire.

Kennedy also served with Kelvinator and Nizer before coming to Norge as director of quality while the division was still in Detroit. His other positions include that of resident product engineer, master mechanic, assistant plant manager, and director of engineering. He will continue to hold this last position.

In addition to his refrigeration experience, Kennedy has helped develop every Norge product except automatic washers. He developed the new "Customatic" refrigerator-freezer combination, the upright freezer, and during World War II supervised production of the Mark 61 gun director.

He is a member of the American Society of Refrigerating Engineers.

11,975 Room Air Conditioners Sold to Miami Dealers In 11 Months of '53

MIAMI, Fla.—A total of 11,975 room air conditioners were sold to dealers in Dade county (Miami) during the first 11 months of 1953, the Florida Power & Light Co. reported recently.

The utility's figures cover sales by wholesalers to dealers in the county plus figures supplied by department stores and other retailers who buy directly from out-of-state sources of supply.

In the entire territory covered by Florida Power & Light, which includes most of central and southern Florida, there were 18,880 air conditioners sold in the first 11 months of the year.

This compared with 10,670 units for the same period in 1952, it was pointed out.

November sales this year in the utility's territory numbered 567 units, as compared with 94 last year, according to the report.

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Industry Suggests Changes to FHA

Asks Altered Instructions to Field Offices Covering Acceptance of Residential Air Conditioning Systems

WASHINGTON, D. C. — The air conditioning industry is anxiously awaiting a decision from the Federal Housing Administration on changes which industry representatives have suggested be made in FHA Engineering Bulletin ME-10, which guides FHA field offices in their acceptance of residential air conditioning systems for FHA financing.

The suggested changes have been submitted jointly to the FHA by the Air-Conditioning and Refrigeration Institute and the National Warm Air Heating and Air Conditioning Association.

In addition to outlining the changes, the industry presentation explained the proposed changes in the following manner:

"Regarding paragraph 1 on page 2 of the FHA ME-10 Bulletin, we suggested that we strike out 'until further notice' in order to provide that the projects already in progress will not be affected.

"On the same page under the heading 'objective' we suggest a rewording of this paragraph, since the original wording could be read to infer that close relative humidity control would be accomplished with varying outdoor conditions, whereas, this is not the result actually obtained with this type of equipment. Past experience indicates that such results are not needed in order to give complete satisfaction to the user.

Conditions To Be Provided

"It is suggested, furthermore, that the objective be defined as providing temperature and relative humidity conditions within the comfort range since this range can be clearly defined by using the chart in the ASHVE Guide. We recommend that this chart be reproduced and attached to the ME-10 Bulletin.

"Since ME-10 deals with cooling only, any reference to heat loss should be omitted. Further, since an important segment of the industry does not use c.f.m. in designing systems, it is suggested that this paragraph be re-worded as follows: 'Complete specifications and plans of the proposed system indicating estimated heat gain for the structure, and c.f.m. or B.t.u. per hour required for each conditioned space shall be included with the submission.'

No Operating Costs

"The wording change under paragraph 2, 'estimated cost,' was suggested to eliminate the possible interpretation that actual operating costs and maintenance costs could be given. Whereas, while actual cost of installation can be given, it would be necessary to give estimated costs of operations and maintenance. We believe then, that the suggested rewording becomes a more reasonable request.

"Under 'Clearances,' paragraph 3, here again the fact that this bulletin covers cooling only, and since there are no regulations covering clearance of cooling systems, we feel that this paragraph could be properly changed as suggested.

"Regarding paragraph 4 on this same page, 'Design Conditions,' it was felt that since this paragraph, as written, could and probably would be interpreted as indicating specific requirements, it could be rewritten to avoid imposing limitations at variance with customer acceptance in some geographic areas.

"For example, in Arizona, higher dry-bulb temperatures are acceptable because of the low dewpoint, and conversely in the Gulf Coast areas higher relative humidity is acceptable because of the higher outside dewpoint. It is therefore recommended strongly that the last sentence in that paragraph read as suggested to take care of these cases.

Re-define 'Heat Gain'

"Regarding paragraph 5 on page 5, 'Heat Gain' we strongly urge the wording as contained in our report. This suggested rewording was based primarily on the fact that the Standards of ARI and the Manuals of the National Warm Air Heating and Air Conditioning Association represent the consensus of the entire industry and should be so recognized.

"Furthermore, since there is considerable difference of opinion as to the adequacy of basing heat gain on 55% of the total maximum instantaneous demand of heat gain and latent heat, the paragraph jointly recommended by the two associations is therefore suggested in its place.

"Under Item 6, 'Sound and Vibration,' we have recommended the elimination of any requirements as to decibel limitations. This is due entirely to the difficulty, if not the impossibility, of applying even the most accurate measurement of sound level because of innumerable, immeasurable factors. The people most familiar with sound measurements all agreed that decibel measurements are not a practical index of objectionable qualities of sound. It was felt, therefore, while decibel measurement is entirely possible, it would constitute an impractical requirement in this instance.

Insulation, Vapor Barrier

"Under Item 7, 'Insulation and Vapor Barrier,' it is felt that the suggested paragraph is more specific and descriptive of places where insulation and vapor barrier are required. We feel that this is an editorial change and does not change the sense and intent of the original paragraph. On the next page, Item 9, 'Refrigerant,' the suggested change was made to eliminate the proprietary

nature of the original statement.

"Item 10, 'Design of Duct Work,' the suggested rewording of this paragraph was to eliminate the requirement that only one method be used in designing duct work, and to establish the fact that balancing devices should be used in each supply run.

"Item 11, 'Supply Outlets.' Here we feel that the revised statement is more in accord with the equipment available and its application as to location, velocity, etc.

On Safety Devices

"Item 13, 'Safety Devices.' We feel that the suggested rephrasing of paragraph 'a' under this item, spells out the standards and approvals that are generally considered acceptable throughout the industry. Under paragraph 'b,' we have suggested a rewording to take care of the fact that many small motors are not provided with low voltage and thermal protection. (For example, damper motors.) In our meeting in your office, it was suggested that the wording of our report be further amended to state 'each motor shall be provided with over-current or thermal protection' to more adequately cover this situation.

"Item 14, 'Wiring.' The rewording of this paragraph is suggested simply to more clearly define the required wiring diagram. We have used 230



volts in describing the electric service because this is the standard nominal voltage for single-phase current as used in the industry.

Piping and Corrosion

"Item 15, 'Piping.' Since it was felt all types of galvanizing should be acceptable we recommend leaving out the words 'hot-dipped.' Furthermore, since all water causes some corrosion, scaling, etc., it was felt that undue hardship would be placed on consumers by requiring water treatment devices to be installed on all air conditioning equipment using condensing water.

"Item 16, 'Installation Equipment.' This is simply a matter of definition. It is our feeling that the word replacement more adequately describes the renewal of equipment than the word removal.

Guarantee and Warranty

"Item 18. This paragraph as originally written, includes both a general guarantee in performance and a detailed statement of equipment capacity. It has been pointed out that the acceptance of detailed equipment capacity specification materially weakens the value of the over-all

performance guarantee. It is therefore recommended that all detailed equipment information that is desired should be requested prior to this paragraph. Further, this over-all performance is to be guaranteed by the contractor.

"Item 19, 'Warranty.' The original wording of this paragraph did not clearly place the responsibility in carrying out the terms of the warranty. It has long been the custom of the industry for the manufacturer of the equipment to supply the parts required in fulfilling their warranty. The contractor then supplies the labor required in making this replacement and presumably has setup a service reserve in his charges for the installation to cover this expense. The suggested rewording clarifies this question.

"Item 20, 'Economy of Operation.' Since it is felt that other appropriate FHA documents adequately cover thermal construction of the house, we could see no need for including this item in ME-10."

(The above material is in explanation of the proposed changes in FHA Engineering Bulletin ME-10. Text of the proposed changes is published on page 7.)

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A. Yes. "Genetron" 12 is the widely used refrigerant, dichlorodifluoromethane, which has long been the mainstay of the refrigeration and air conditioning industry. "Genetron" 11 is trichloromonofluoromethane, second of the big "work horse" fluorine refrigerants.

Q. Are "Genetrons" approved?

A. Certainly. "Genetron" refrigerants have been tested exhaustively by major manufacturers and are being used in their refrigeration and air conditioning equipment. "Genetrons" meet the very highest standards of performance. They are identical in application with dichlorodifluoromethane and trichloromonofluoromethane from any source.

Q. What about their moisture content?

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	"Genetron" 12	"Genetron" 11
Moisture-wt. % max.	0.0010	0.0025

Q. Is their overall purity good?

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A. "Genetron" refrigerants are offered in the various standard container sizes required by manufacturers and wholesalers. "Genetron" 12 is shipped in 2,000-lb., 145-lb., 25-lb., and 10-lb. cylinders; "Genetron" 11 in 2,200-lb. cylinders and 200- and 100-lb. drums.

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Text of Proposed Revisions for FHA Engineering Bulletin ME-10

August 28, 1953
Suggested Revisions of FHA
Mechanical Engineering Bulletin
No. ME-10,
Cooling Requirements

1. In part (1) of the Note on the top of Page 2, it is suggested that the words "until further notice" be deleted.

2. On Page 2, it is suggested that the Objective be reworded to read as follows:

"The objective of requirements relating to cooling is to increase comfort in warm seasons by means of facilities which are safe, quiet, economical in operation, and will provide design temperature and relative humidity conditions within the comfort range in the specified conditioned living spaces when the design outside wet and dry bulb temperatures are as specified."

3. On Page 2, in the first sentence of the paragraph on Application, it is suggested that the words "forced air" be replaced with "central forced air systems."

4. On Page 2, it is suggested that the paragraphs on Acceptable Installations and Unacceptable Installations be replaced with the following, the subsequent note remaining as now written:

"Permanent Installations. Installations with ductwork serving, as a minimum, at least two separately-enclosed, habitable rooms including any adjacent spaces not separated

by doors shall be considered as permanent installations for the purposes of this bulletin."

5. On Page 2, under Plans and Specifications, it is suggested that the words "heat loss" and "and c.f.m. required" be deleted.

6. On Page 3, it is suggested that the sentence on Estimated Costs be reworded as follows:

"The submission shall include cost of the installation and estimates of annual operating cost and maintenance cost."

7. On Page 3, it is suggested that paragraph on Clearances be reworded to read:

"Clearances for the heating section of combination heating and cooling units shall be as required for the heating section in the Minimum Property Requirements for heating."

8. On Page 3, it is suggested that the third and fourth sentences of the paragraph on Design Conditions be revised as follows:

"Inside design conditions shall prescribe the dry bulb temperature and average relative humidity. Inside design conditions in excess of 80° F. are not recommended for most geographic areas."

9. On Page 3, it is recommended that the paragraph on Heat Gain be replaced with the following:

"Heat Gain. Calculations of heat gain for the spaces to be cooled shall be made in accordance with

recognized and acceptable methods, such as described in the current ASHVE Guide, in applicable standards of the Air-Conditioning and Refrigeration Institute, or in applicable manuals of the National Warm Air Heating and Air Conditioning Association."

10. On Page 3, it is suggested that the second sentence of the paragraph on Sound and Vibration be deleted.

11. On Page 3, it is suggested that the paragraph on Insulation and Vapor Barrier be reworded to read:

"Insulation and Vapor Barrier for Ducts. Where necessary, supply ductwork in non-air conditioned crawl or attic spaces shall be insulated and covered with a properly-jointed vapor barrier to prevent condensation. Where necessary, return ductwork in attic spaces shall be insulated, but the vapor barrier may be omitted. In all cases, adequate means shall be taken to prevent condensation in or entrance of moisture into ductwork."

12. On Page 3, it is suggested that the paragraph on Refrigerant be reworded as follows:

"Refrigerant used shall be non-toxic and incombustible and shall be approved as a Group I refrigerant in accordance with the American Standard Safety Code for Mechanical Refrigeration (ASA B9.1). Water shall be considered acceptable as a refrigerant."

13. On Page 3, it is suggested that the paragraph on Design of Ductwork be revised to read:

"Design of ductwork shall be in compliance with recognized and acceptable methods, such as described in the ASHVE Guide, in applicable manuals of the National Warm Air

Heating and Air Conditioning Association, or in manufacturers' published recommendations. Balancing devices for volume adjustment shall be provided for each run. Resistance to air flow through the distribution and return system shall be less than the available external static pressure indicated in the manufacturer's rating of the proposed equipment."

15. On Page 4, it is suggested that the paragraph on Supply Outlets be revised as follows:

"Supply air outlets may be of either the fixed or adjustable vane type. The capacity, outlet velocity, and location of these outlets shall be in accordance with the manufacturer's recommendations for proper diffusion and distribution for residential application."

15. On Page 4, it is suggested that the paragraph on Safety Devices be changed to read:

"Safety Devices
A. Cooling equipment shall be provided with suitable safety relief devices in accordance with the American Standard Safety Code for Mechanical Refrigeration (ASA B9.1) or shall be listed with Underwriters' Laboratories or the American Gas Association.
B. Each motor shall be provided with overcurrent protection."

16. On Page 4, it is suggested that the paragraph on Wiring be reworded to read:

"Wiring. The manufacturer's wiring diagram shall be furnished for packaged units. Where field built-up systems are provided, a complete diagram of the interconnecting wiring shall be furnished. 230-volt service shall be provided when required by the Chief Underwriter."

17. On Page 4, it is suggested that the paragraph on Piping be replaced with the following:

"Piping used for conveying condenser cooling water shall be galvanized, copper, or other corrosion-resistant material acceptable to the Chief Underwriter."

18. On Page 4, in the sentence on Installation of Equipment, it is suggested that the word "removal" be replaced with "replacement."

19. On Pages 4 and 5, it is suggested that the paragraph on Statement Regarding Intent be deleted entirely (preferably) or replaced with the following:

"Performance Guarantee. A performance guarantee shall be provided with the contract specifications."

20. On Page 6, it is suggested that the paragraph on Warranty be reworded to read:

"Warranty. The standard manufacturer's warranty shall be required on all equipment."

20. On Page 6, it is suggested that the paragraph on Economy of operation be entirely deleted.

G-E Distributor Gets \$172,000 Order for Air Conditioners

BROOKLYN—Apparatus Distributors Inc., distributor of General Electric packaged air conditioners in New York City, Nassau, Suffolk, and Westchester counties, and northern New Jersey, recently received a record \$172,000 order for 1954 G-E packaged units, the company has announced.

The order was placed by Arrow Utilities, Brooklyn, one of New York's largest air conditioning contractors.

General Electric officials said this was the largest single order of packaged air conditioners ever placed by any dealer through their distributors, according to Apparatus Distributors.

Harold Reiter and Paul Dinowitz, owners of Arrow Utilities, said the record order was placed to cover an anticipated 150% increase in sales and to insure early season orders against any price increases.

"If early season business is any indication of what is to come, and I believe it is, we will have to place another order with Apparatus Distributors before the season is over," stated Reiter.

Coleman Opens Western Zone Office In Omaha

WICHITA, Kans. — Establishment of a western zone office in Omaha, Neb., has been announced by The Coleman Co., Inc. Charles O. Slaby has been named zone manager.

The western office is the fourth zone office set up this year to serve distributors of Coleman home heating and air conditioning equipment. Others are located in Dallas, Philadelphia, and Chicago.

The Omaha zone comprises Nebraska, Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nevada, Oklahoma, Oregon, South Dakota, Utah, and Washington.

Slaby is a graduate of Northwestern university. Before joining Coleman, he was associated with Florence Stove Co., Gardner, Mass., as sales manager, heating division; Nesco, Inc., Milwaukee; Office of Price Administration, Washington, D. C.; and Montgomery-Ward, Chicago.

Associated with Slaby in the Omaha zone are Paul W. DeGood, Harry H. Pike, Robert E. Lyda, and Lewis White, regional sales managers, and Elvin D. Sandridge and Charles E. Yeoman, service engineers.

Address of the office is 310-311 Woodmen of the World building, 14th and Farnam Sts., Omaha.

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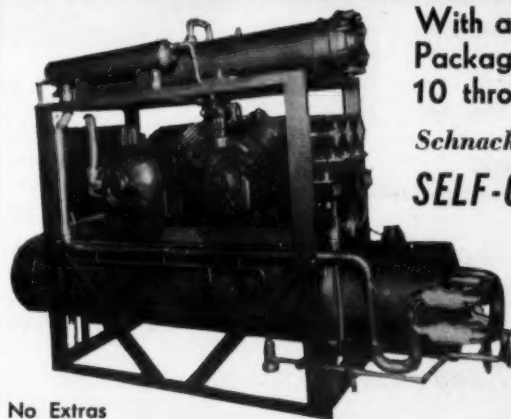
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INSIDE DOPE

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By GEORGE
F. TAUBENECK

(Concluded from Page 1, Column 1)

"Every society," said Dr. Johnson, "has a right to preserve public peace and order, and therefore has a good right to prohibit the propagation of opinions which have a dangerous tendency. To say the 'magistrate' has the right, is using an inadequate word; it is the 'society' for which the magistrate is agent. He may be morally or theologically wrong in restraining the propagation of opinions which he thinks dangerous, but he is politically right."

A dissenting clergyman, Dr. Mayo, held that everyone is entitled to liberty of conscience.

"Sir, I agree with you," Johnson replied. "Every man has a right to liberty of conscience, and with that the magistrate cannot interfere. People confound liberty of thinking with liberty of talking . . . But, sir, no member of a society has a right to teach any doctrine contrary to what the society holds to be true."

Dr. Mayo answered:

"I think the magistrate has no right to interfere till there is some overt act." To which Boswell replied:

"So, sir, though he sees an enemy to the state charging a blunderbuss, he is not to interfere till it is fired off."

"If I think it right to steal Mr. Dilly's plate, I am a bad man; but he can say nothing to me. If I make an open declaration that I think so, he will keep me out of his house. If I put forth my hand, I shall be sent to Newgate. This is the gradation of thinking, preaching, and acting: If a man thinks erroneously, he may keep his thoughts to himself and nobody will trouble him; if he preaches erroneous doctrine, society may expel him; if he acts in consequence of it, the law takes place, and he is hanged."

Food for Thinking

A liberal is a man who stands for the least possible restraints upon his fellowman by government. Some unions, and all rabble "democracy," comprise self-devouring monstrosities without lineaments or integrity.—RABBI SOLOMON FARB.

The need and the desire to serve have always been and always will be a major motivating force of business. Neighbor competes with neighbor, and pretty ruggedly, too, but nearly always to the end of giving the consumer more and better products, superior service, higher value. This is the American tradition. The fact that it has built the highest standard of living the world has ever known is evidence, to me at least, that there is something more than a dream of profits behind the progress we have achieved and hope to achieve in the future.—JERVIS J. BABB.

We grow neither better nor worse as we grow old, but more like ourselves.—MAY LAMBERTON BECKER.

Industrial research will make the

sun and the sea important sources of energy and materials. Each acre of land in the U. S. receives sun energy equivalent to 800 tons of coal every year. It is expected that scientists will discover ways to utilize this energy.—C. L. MCCUEN.

What the world needs is a nice way to be rude to people.—SANDIE STEVENS.

The longer I live, the more I am satisfied of two things: first, that the truest lives are those that are cut rose-diamond fashion, with many facets answering to the many-planned aspects about them; secondly, that society is always trying in some way or other to grind us down to a single flat surface. It is hard work to resist this grinding-down action.—OLIVER WENDELL HOLMES.

Only wishful thinkers love the slogans of realism.

When you hear a speaker say, "Facts, gentlemen, are stubborn things," prepare for a ramble through Utopia.—F. J. SHEED, *Society & Sanity*.

Wrong thinking creates every crisis.—BERNARD BARUCH.

Any Arguments?

"Some of our professors tell us that if you work part of the time then you can quit occasionally, and go fishing or to the football game. The government pays you for loafing. When you are 65 they give you a pension, too. I think they ought to give you a pension when you are young, so you can enjoy it. Maybe you will die before you get old and not get your pension. That isn't fair."—High school essay prize winner.

RESTAURANT & BAR REMODELING

Converting Display Window to Refrigerator Sells Lots of Steaks for Esquire Pub

CHICAGO — Converting a former display window into a huge display refrigerator and exhibiting a dial thermometer which gives interior temperature readings have sold a lot of additional steaks for the Esquire Pub on downtown W. Monroe St., here.

A ½-hp. Frigidaire unit keeps the 6 by 5 by 5-ft. interior of the display window at between 35° and 40° F., with an overhead blower unit insuring smooth, even distribution of chilled air. In addition to some 24 shell steaks from which tender T-bone steaks are cut, brilliantly-polished stainless steel trays on either side display other cuts, such as New York steaks, tenderloin, and sirloin.

Also in the window is a huge dial thermometer, 12 in. in diameter, according to Alber Hollander, manager. Above the thermometer is a sign, with white letters printed on a red background, which points out "The Temperature In This Window Is." Below, the dial pointer shows tem-



GIANT THERMOMETER in door shows customers that steaks are being aged at right temperature.

peratures of around 36° to indicate that the beef on display is being properly aged for maximum flavor and tenderness.

Restaurant Remodeling Provides Cooling, More Refrigeration, Larger Seating Area

CHATTANOOGA, Tenn. — Chattanooga's largest public eating place, the S & W Cafeteria is currently undergoing a complete face-lifting that will more than double its seating capacity and provide 110 tons of air conditioning for its 2,000 daily patrons.

Located in an 85-year-old building in the heart of Chattanooga's business district, the cafeteria is long and narrow, measuring only 38 ft. wide but running the entire 200 ft. from Market St. to Broad St.

Before the remodeling, there was only one serving area so that a long line of waiting patrons snaked through the establishment during rush hours. After the \$200,000 remodeling job is completed, there will be two centrally located serving areas to speed up service and 225 more seats for diners.

Most of the additional seats will be on the second floor, one end of which is being converted into a dining room. The remainder of the second floor is occupied by the kitchen.

THIRD FLOOR FOR FOOD STORAGE

The third floor will be used for food storage and the basement will contain a new repair and maintenance shop and the air conditioning machinery.

The air conditioning system is powered by two 55-ton Worthington compressors using "Freon-22". An evaporative condenser is being mounted on the roof.

J. B. Corlew of the Corlew Engineering Co. here, who is making the air conditioning installation, said he is installing a large loop and check valve on the discharge line to prevent liquid from returning to the compressor from the evaporative condenser.

Cooling and heating coils and 21,000 c.f.m. American Blower fans are being installed on the second floor in the center of the building. From here, ducts run between the first floor ceiling and the second floor to cool the first floor serving and dining areas. Other ducts go forward to cool the second floor dining room. The kitchen is not air conditioned, but is ventilated with exhaust fans to prevent odors from passing into the dining areas.

FANS CARRY FOOD ODORS OUTSIDE

Exhaust fans are also posted in the first floor serving areas to carry food odors directly to the outside.

Ed A. Beardslee, administrator of the S & W remodeling project, representing Binculli and Palm, Architects, pointed out that sufficient air is blown into the dining areas so that a positive pressure is constantly main-

tained on the outside doors. Thus no outside air comes in from that source. Similar pressure is maintained on the doors between the kitchen and second floor dining room so that no kitchen odors are wafted out there.

To maintain this positive pressure, he said, a barometer is placed at the air outlet nearest the serving area in the center of the first floor. If the pressure should fall too low, a control will kick the fans on to restore the balance.

Return air is brought to the cooling unit from the first floor only, Beardslee said.

REFRIGERATION FACILITIES SHIFTED

In addition to the air conditioning, the remodeling involves a shift in some of the refrigeration facilities, he noted. Previously, he declared, the storage freezer and ice plant were located in the basement. But to make room for the repair and maintenance shop, both of these are being removed. A new freezer and a 1-ton Vogt self-contained ice cube maker are to be installed on the third floor.

Beardslee said that steel beams are being inserted between the wooden joists under the third floor to strengthen it. When this is done, the floor will be able to carry 200 lbs. per sq. ft., he declared.

The new custom built freezer will measure 24 by 12 by 7½ ft. and will be designed to hold -5° F. It will be powered by two 5-hp. units. It will be located only a few feet from the elevator shaft so that no time will be lost by employees in loading and unloading it.

He pointed out that while it is a bit unusual to put a storage freezer at the top of the building, it will be more convenient to kitchen personnel and will be just as easily accessible to delivery men as the basement freezer was.

CHUTE CARRIES ICE CUBES TO LOWER FLOORS

The Vogt ice cube maker will be located near the freezer and will be mounted on a storage chest. A chute will run from the chest to both the second floor kitchen and to a first floor serving area. A switch will be provided to direct the flow of cubes to either locations as desired.

Beardslee explained that the kitchen is already equipped with considerable refrigeration equipment required for use in food preparation operations. This equipment includes two 6 by 24-ft. freezers, a walk-in custom built bakery refrigerator, and a 4 by 6-ft. dough storage refrigerator.

All of the remodeling is being done while the cafeteria maintains full operations, Beardslee noted.

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Selective Charges

It is true... the record of this famous commercial refrigeration combination dates all the way back to 1934 when Sporlan introduced it to the refrigeration industry. Then, year after year, thousands upon thousands of installations proved their peak performance on every job, every time.

Now... the Sporlan symbols of this combination have become standard by-words for refrigeration men everywhere, who know and demand peak performance on their commercial refrigeration installations.

They all say... Give me Sporlan "G" valves with "C" and "Z" Selective Charges for My Money!

Take advantage of this 20 Year Peak Performance Record. Order Sporlan "G" Valves with Selective Charges from your wholesaler today, and see for yourself what Peak Performance really means! Have your wholesaler give you a copy of the Sporlan Catalog, too. With it, you can select the proper thermostatic expansion valve, solenoid valve and Catch-All to get that Right-Down-The-Line Sporlan Peak Performance on every installation you make!

SPORLAN VALVE COMPANY
7525 SUSSEX AVENUE ST. LOUIS 17, MO.

EXPORT DEPARTMENT
89 BROAD STREET NEW YORK 4, NEW YORK



SPORLAN

Airlines Terminal Installs First 'Unibay' System

\$7 Million Structure Uses Peripheral System for Both Heating, Cooling

NEW YORK CITY — The new \$7,000,000 East Side Airlines Terminal, which opened here recently, is the first building in the country to use the new "Unibay" system for peripheral heating and cooling in its air conditioning setup.

Perimeter air conditioning through a series of enclosures running along the four outer walls of a building with a fan-coil unit under each window has long been recognized as one of the most efficient methods of warm or cool air distribution and has been widely installed in new structures.

Unibay, a patent-pending development of Eugene J. Brandt & Co., Inc., is the basic peripheral system, but redesigned so that only one fan-coil air conditioning unit in an extended enclosure can efficiently service an area or bay now employing three comparable units. Consequently, installation and operating costs are considerably lower.

25%-30% SAVING CLAIMED

Howard Rose, vice president of Brandt & Co., a firm of mechanical contractors, estimates that Unibay, when installed initially—in either new or old buildings—can effect 25% to 30% savings over other types of perimeter fan-coil enclosures.

The terminal's Unibays, which make up one of the four basic cooling, heating, and ventilation systems in the new 3-story, 200 ft. by 400-ft. building, have been installed along the four walls of the concourse, an upper level area devoted chiefly to office space.

Each Unibay enclosure is approximately 26 ft. long, the distance between the pillars of a three-window bay. A single fan-coil unit feeds warm or cool air through a duct to three sets of adjustable grilles located under each window in the top of the enclosure.

This means if a bay of similar size were to be partitioned off into indi-

vidual offices, one Unibay enclosure could efficiently air condition three 9-ft. wide sections.

In the Unibay, as with other peripheral systems, the cooling and warming of the air is accomplished by chilled or hot water flowing through the fan-coil unit.

Since sun, wind, or other weather conditions cause temperatures on each side of a building to vary, automatic controls deliver compensating degrees of heating or cooling along each interior wall independently. However, individuals can regulate the amount of conditioned air in their immediate area to suit their own tastes by adjusting the grilles in the top of the Unibay enclosure.

SERVES AS PLENUM CHAMBER

In addition to functioning as distribution units, the Unibays in the terminal also act as plenum chambers.

A 300-ton, electrically driven Worthington centrifugal compressor supplies the refrigeration for the

chilled water as well as for the building's entire cooling system. Steam, to heat water for both the terminal's heating system and for general use, is purchased from a near-by plant of the New York Steam Co. At full capacity, about 15,000 lbs. per hour will be used.

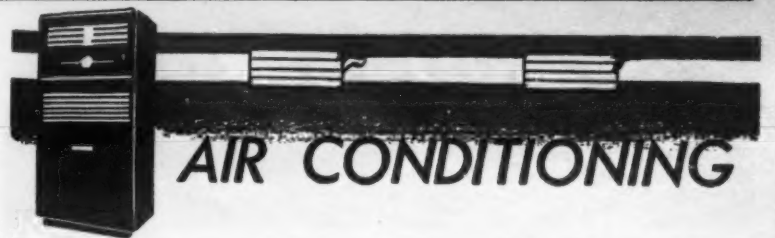
OTHER SYSTEMS TO USE CENTRAL WATER SUPPLY

Other sections of the building will be air conditioned through separate systems which will draw on the same central supply of chilled or hot water. A network of recessed wall and ceiling ducts will bring treated air to the rotunda (the main lobby), while another series of ducts will supply the individual baggage rooms. The restaurant, cocktail lounge, and other public facilities will be air conditioned through branch systems.

Master controls again will regulate the temperatures of various areas according to the changes in load factor. Up to 100% outside air can be brought in without refrigeration or



MECHANIC INSTALLS fan-coil unit in a "Unibay" enclosure in new East Side Airlines Terminal, New York City.



heating when it is so desired.

The entire air conditioning and ventilation system, excluding the basement garage, can deliver 250,000 c.f.m. through its more than one mile (5,500 ft.) of ducts.

The garage, where the fleet of 100 Carey airport coaches are to be serviced and maintained, has an independently controlled setup for heating and ventilation.

GARAGE AIR CHANGED AT 50,000 C.F.M.

To carry off fumes and gases, air in the garage is changed at the rate of 50,000 c.f.m. Fan-coil units suspended from the ceiling supply the heating. Since large amounts of water are needed for the automatic machine which washes the big 29-passenger coaches, the garage will also have its own hot water supply, heated through New York Steam.

Two more tanks, one with a capacity of 205 gal. per hour and the other of about 150 gal. per hour, provide hot water for the rest of the building. During winter months when steam is used for the hot water heating system, an "economizer" further utilizes the condensed steam returning at about 120° to heat the water tanks.

The terminal's heating, air conditioning, and ventilation system was designed by the engineering firm of Sears & Kopf, Eugene J. Brandt & Co. installed the system and designed the Unibay.

LOCATED IN MID-MANHATTAN

The new terminal is located in mid-Manhattan at First Ave. and 37th St. It was built by the Triboro Bridge and Tunnel Authority and is leased for 20 years to the East Side Airlines Terminal Corp., a private company formed by the ten major U. S. airlines which will use and maintain the facilities. They are: American,

Capital, Colonial, Eastern, National, Northeast, Northwest, Pan American, TWA, and United.

In addition the ten following foreign flag airlines will operate from the Terminal: Air France, BOAC, El Al (Israel), KLM, LAI (Italian), LAV (Venezuelan), Sabena, SAS, Swissair, and Trans-Canada.

The terminal is now the only departure and arrival point for all airport coaches serving these airlines between LaGuardia, New York International, and, temporarily, Newark airports. Construction is scheduled to begin next year on the West Side Airlines Terminal which will eventually handle all the Newark airport traffic via the Lincoln tunnel.

Greenbrier Wing To Be Cooled by Worthington

HARRISON, N. J.—Worthington Corp. recently received an order to supply the central refrigeration equipment to air condition a wing now being added to The Greenbrier in White Sulphur Springs, W. Va.

The 600-room Greenbrier, owned by the Chesapeake & Ohio Railway Co., is one of the outstanding year-round resorts in the United States and is the site of many meetings.

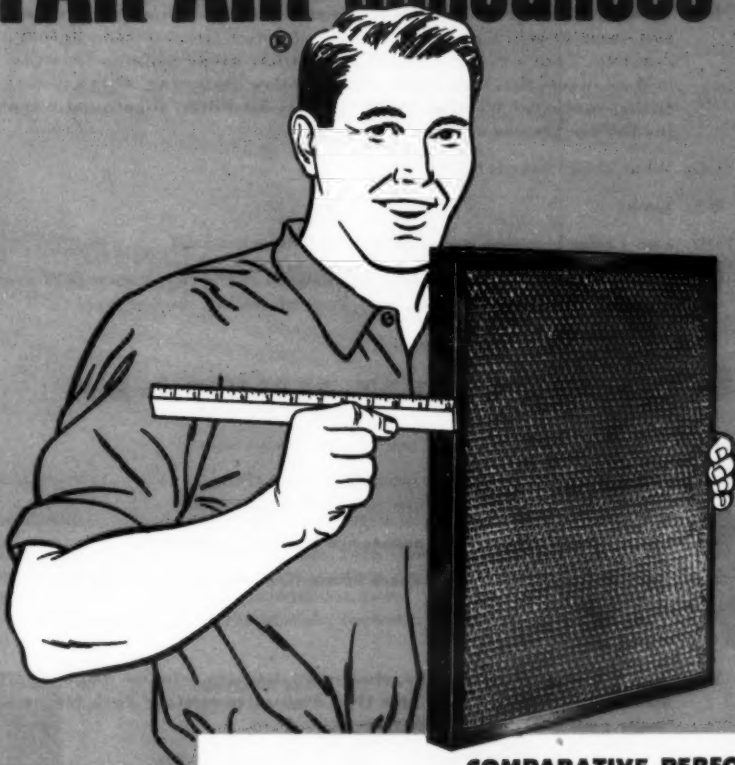
The new addition will have an auditorium with a capacity of 1,075 for meetings and 860 for banquets. A theater will accommodate 400. Both will have full stages with all facilities, plus the latest projection equipment and public address systems. Various sized smaller meeting rooms also are included.

The Worthington equipment will deliver approximately 350 tons of cooling provided by a centrifugal refrigeration system with a 350-hp. Electric Machinery Co. squirrel cage motor and gears.

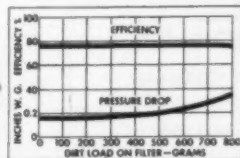
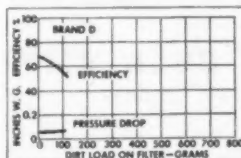
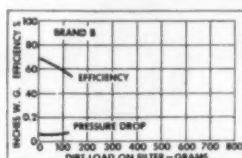
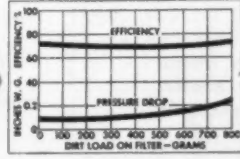
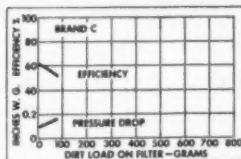
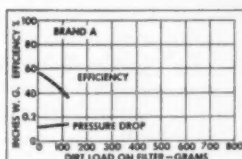
FAR-AIR announces 1st high-low velocity 1" filter

HOLDS 7 TIMES AS MUCH DIRT AS OTHER 1" FILTERS

Filters half-again as much clean air because of 50% greater capacity
Gives sustained efficient performance with low pressure loss
Can be used at either high or low velocity



COMPARATIVE PERFORMANCE



ALL CURVES BASED ON 20x20x1" FILTERS

NEW
FAR-AIR
1" FILTER
AT
800 CFM

NEW
FAR-AIR
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AT
1200 CFM



Better by FARR
Better buy FARR



TELLING and SELLING

A guide to smart advertising and merchandising practices.

This series of articles comprising ideas and principles for the small retail or manufacturing business is written by James D. Woolf, who was for more than 20 years a vice president and director of J. Walter Thompson Co., one of the largest advertising agencies.

By James D. Woolf

People Buy with Their Hearts As Well as Their Heads

In this column I have always insisted that advertising copy, whether national or local, should provide the reader (or listener) with adequate product facts.

For example: "This chic suit for misses is made of finest quality Rayon Crepe. Jacket has long, tapering lapels, padded hips. Narrow skirt has back kick pleat, smooth Talon zipper placket."

But we must never forget that people, both men and women, buy with their hearts as well as their heads.

When a wife complains to her husband that "I have absolutely nothing to wear at the party tonight," her protest is an emotional one. The fact is that she has a dozen pretty dresses hanging in her clothes closet, but she is anxious to outshine Mrs. de Smyth who has been acting upishly lately.

At this moment factual product information isn't her No. 1 concern.

TRY FOR AN EMOTIONAL TWIST

Howard Abrahams, a manager on the staff of the National Dry Goods Association, tells us of a test that was made by the NRPGA in collaboration with New York university.

Two signs were alternated on a department store counter under identical conditions. One said:

GOLD METAL BELTS, 98¢.

The other said:

BRIGHTEN YOUR ENSEMBLE. GOLD METAL BELTS, 98¢.

The second sign sold 24% more belts. The reason is clear. The added phrase, "Brighten Your Ensemble," was not an item of product information. It implanted an emotional idea in the consciousness of women shoppers. An ensemble that outshines Mrs. de Smyth's!

A story is told of a New York department store that found itself unable to dispose of a stock of cheap pianos. Advertisements that told the public of the merits of this particular item piano—facts about its construction, its beautiful finish, its sweet tone, its exceptionally low price, etc.—brought no results.

Then one morning the newspapers came out with an advertisement displaying this headline: *Make Your Daughter Mary A Lady*. The copy proclaimed that music was the soul of culture, that ability to play the piano was the acme of social finish and the secret of popularity. It was

a stirring appeal aimed not at the head but at the heart. Twenty-four hours later, so the story goes, every piano was sold.

PEOPLE BUY IDEAS

People spend their money for this or that product in the hope it will do something for them. It may be said, in a sense, they don't think of a product in terms of what it IS—but what it will DO.

Often the most important thing it will DO is satisfy an emotional need. They bought the famous Five-Foot Book Shelf of Dr. Charles Elliot's in the hope it would add charm and interest to their conversation. They buy Cadillacs as evidence of their wealth and importance. They wear ermine and mink for much the same reason. They buy scores of products just to be in the swim—such products are "the thing to do."

Frequently, in other words, they buy emotional ideas.

The late Lorin F. Deland, a famous adman in his day, once told this story:

One Saturday afternoon Deland noticed two boys, who were about the same age, standing on opposite sides of the street in Springfield, Mass. So far as he could judge, equally large crowds of pedestrians were moving along on both sides. The bootblacks had no regular stand. Each had his box slung over his shoulder and, standing on the curbstone, solicited passersby to stop and have a shine.

Each boy had one call, a method of vocal solicitation repeated at regular intervals. The two calls were entirely different, but each was composed of just four words. Neither of the boys ever varied his call. Yet one of these boys, by the peculiar nature of his call, seemed to be getting twice as much business as the other, and Deland watched them for a long time.

ONE BOY SOLD AN IDEA

The cry of the first boy was "Shine your boots here!" The cry of the second boy was "Get your Sunday shine!" It was then Saturday afternoon, and the hour was four o'clock.

The first boy offered merely a "product." The second boy offered an IDEA.

Here were crowds of people hurrying by with bundles under their arms. Where were they going? Home, of course. What was in those bundles? Why, new clothes, at least in a lot of them. The next day would be Sunday and these folk would



PIANO ADVERTISEMENT which claimed that musical ability would "make daughter Mary a lady" reportedly sold out an entire stock of cheap pianos after factual copy had failed to move the merchandise.

dress up in their Sunday finery, go to church, visit with their friends, court their best girls, have the preacher for dinner.

These people, reasoned the second boy, have a hankering to look their best on Sunday. A shine wasn't merely a "Gold Metal Belt." So he shouted out to the passerby what his

"product" would DO for them—namely, *brighten their Sunday ensemble*. The simple call "Sunday shine" was enough to get over the idea.

By all means, include adequate product information in your advertising copy. But try hard to include an emotional twist when possible.

Packard-Bell Prices Room, Evaporative Coolers

LOS ANGELES—Retail list prices of its new room air conditioners and evaporative coolers were announced recently by Packard-Bell Co.

Air conditioner prices are: Model 7554, ¾ ton, with one-year warranty, in mahogany, \$299.95, oak and colonial, \$309.95; model 755, ¾-ton custom deluxe, cooling and heating, with five-year warranty, mahogany, \$399.95, oak and colonial, \$409.95;

model 10054, 1-ton custom deluxe, cooling and heating, five-year warranty, mahogany, \$429.95, oak and colonial, \$439.95.

Evaporative cooler prices are: Model F84, portable, 800 c.f.m., \$39.95; model F164D, portable window unit, 1,600 c.f.m., \$59.95; model B254 CV (clear view) window unit, 2,500 c.f.m., \$139.95; model B404A, 4,000 c.f.m., \$149.95.

Walker Picked To Head NARDA Fair Trade Unit

CHICAGO—Vergal Bourland, president of the National Appliance & Radio-TV Dealers Association, has announced the appointment of Fred Walker, Fred Walker's, Arlington, Va., as chairman of the Fair Trade Committee for 1954.

Walker is a member of the board of directors of the Washington Appliance Dealers Association, NARDA-affiliated dealer group in Washington, D. C. He has been active, along with the association, in cooperation with the D. C. Business Practices Council in working toward introduction and ultimate passage by Congress of fair trade laws for the Washington, D. C. area.

"That campaign has been given considerable impetus by the recent location in non-fair trade Washington of a mail-order discount house from New York City," NARDA said. "Freedom to sell merchandise at cut-price levels for shipment into fair-trade New York makes such location in Washington a profitable venture for discounters."

Bernard Burnstine of the D. C. Business Practices Council is getting full cooperation from both the Washington Appliance Dealers Association and Walker, as NARDA's representative, to put the curb on such practices, according to NARDA.

New Sears Unit To Be Cooled

MIAMI, Fla.—Sears Roebuck & Co.'s new Miami-Coral Gables retail store, now under construction, will be air conditioned.

Be a York Dealer in '54! because YORK HAS WHAT PROSPECTS WANT

YOU: Mr. Distributor, my customers want features.

WE: York has 'em! There's the York "Heat-Pump", for example. Customers can warm or cool a room at the turn of a dial. No plumbing or fuel required. York's Personal Comfort Balancer keeps cooling where the customer sets it. There's near-flush window mounting, 4-way Rotary Grille, concealed Weather Panel, Million-Air Filter, superquiet sound insulation, greater space-saving design . . .

YOU: What about beauty?

WE: Look!

YOU: Can I offer low-cost units, as well as deluxe models?

WE: Yes! With 18 different models, you can meet the requirements of every customer and every budget. And York prices are competitive!

because YORK HAS WHAT DEALERS WANT

YOU: I'm interested in a really well-known brand name.

WE: We've been in the cooling business since 1885. And this year York will manufacture its ¾ millionth room air conditioner!

YOU: Could I count on you for assistance in case I needed it?

WE: York pays distributors to share know-how with dealers. Ask any York dealer.

YOU: Store promotion aids?

WE: You get banners, giveaways, showroom displays, window displays, streamers . . . field tested aids that dramatize exciting York features, make your customers want to buy.

YOU: Advertising?

WE: York Dealers have the benefit of a truly liberal co-op advertising deal—plus the backing of the biggest national ad campaign in York history! It adds up to newspapers, direct mail, radio, TV, mass-circulation magazines, trade papers, publicity—we're overlooking no opportunity to tell more people about you and York products than ever before! But why not get all the details?



Biggest Bargain Ever Offered TO OUR BIG INDUSTRY

Every phase of air conditioning and refrigeration selling—store layout, and display, financing, inexpensive advertising, dealing with manufacturers and distributors, selecting and getting the most out of salesmen, outwitting competition, making a profit on trade-ins and service, etc., etc.—covered completely in a 638-page encyclopedia:

"BOTH FEET ON THE GROUND"

by GEORGE F. TAUBENECK

This book wasn't dreamed up—it was lived. Consists almost entirely of "case histories" drawn from interviews with dealers all over the country. All your questions answered by successful appliance merchandisers who have worked them out in practice. Profit from the other fellow's experience!

Price \$5.95—ORDER FROM

CONJURE HOUSE DIVISION

Business News Publishing Co.

450 WEST FORT ST., DETROIT 26, MICH.

2-15-54

Please send a copy of Both Feet on the Ground.

☐ \$5.95 enclosed ☐ Send bill

Name

Address

SELL THE MOST!  SELL THE LEADER!

SEE YOUR YORK DISTRIBUTOR

Text of Missouri Utility's Memorandum on Adequate Wiring, Installation, Need for Improved Power Factors for Room Coolers

(Concluded from Page 1)

utility says it will postpone enforcement of this rule until Jan. 1, 1955, in order to permit manufacturers to improve performance of motors. Text of the memorandum is as follows:

Available Voltages

Type of Electric Service and Voltages Available

"In residential areas Union Electric provides single phase alternating current from a 120/240-volt distribution system. Individual customers may have 3-wire, 120/240-volt, single-phase service; however, many of the older dwellings will be found to have only 2-wire, 120-volt, single-phase service connected to the building.

"In the St. Louis downtown area customers are supplied from a 4-wire, 120/208-volt, three-phase system. 120-volt, single-phase supply is obtained between any phase wire and the neutral wire; 208-volt, single-phase service is derived by connecting between two of the phase wires. This type of service may also be found in some of the newer urban and suburban shopping centers and in certain other large buildings.

Voltage Requirements

Voltage Requirements for Individual Room Air Conditioners

"All units in excess of $\frac{3}{4}$ hp. should be connected to 240-volt (or

208-volt) circuits. Units of $\frac{3}{4}$ hp. and smaller may be connected to 120-volt circuits provided they are designed so that the starting inrush currents do not exceed 46 amperes for manually controlled units or 23 amperes for automatically controlled units, and further provided that the full load current is within the capacity limitations of the circuit on which it is to be operated.

"Those room air conditioners with automatic temperature controls which stop and start the motors generally have starting currents in excess of the 23 amperes permissible for use on 120-volt circuits. This causes voltage fluctuation on the customer's service, undesirable light flicker, and interferes with television reception. Unless the manufacturer supplies a starting current limiting device to keep the starting current at or below 23 amperes for 120-volt operation, such units should be purchased for 240 or 208-volt operation.

"When the only service available is 208 volts, consult the manufacturer of the equipment regarding the proper motor to supply, as a standard 230-volt motor may not give satisfactory performance.

Circuit Requirements

Circuit Requirements for Individual Room Air Conditioners

"Be sure the electrical circuit is adequate and safely protected. Overloaded wiring is a potential fire

hazard. Phantom testers, which approximate the effect of the room air conditioner, are available for obtaining a voltage indication without connecting the unit.

"Your attention is directed to the fact that the National Electrical Code, Paragraph 2125A—'Motor Operated Appliances' states:

"The total load shall not exceed 80% of the branch circuit rating if motor operated appliances are supplied."

"Room air conditioners of $\frac{3}{4}$ hp. or less can usually be installed on existing 15 ampere general purpose circuits if they are equipped with motors to operate at 90% power factor under full load conditions, provided the total load on the circuit including the full load running current of the room air conditioner does not exceed 12 amperes.

"One horsepower and larger motors will always require heavier wiring and should be installed on 208 or 240-volt circuits. An exception to this are those units which have twin half horsepower motors instead of a single 1-hp. motor. Such units, if the power factor is acceptable, will operate satisfactorily on a 15-ampere, 120-volt circuit provided the total load on the circuit including the full load running current of the unit does not exceed 12 amperes; or on a 20-ampere, 120-volt circuit, provided the total load on the circuit including the full load running current does not exceed 16 amperes.



Need for Improved Power Factor

Present Room Air Conditioners Need Improved Power Factor

"Many room air conditioners now on the market have power factors of 70% or less. The growing use of these low power factor room air conditioners is resulting in needlessly overloading customer's and company circuits and facilities and is resulting in low voltage conditions at the unit which give rise to customer dissatisfaction with room air conditioners and to increasing service problems for you.

"Service Rule No. 2.21 of the Electric Service Manual for Union Electric system states:

"All lighting equipment, motor driven equipment and appliances shall have such characteristics or be equipped with corrective devices so as to enable company to maintain a satisfactory standard of service. In the case of low power factor, high motor starting current, violently fluctuating loads, etc., the company reserves the right to require customer to install, at his own expense, apparatus to correct the objectionable condition.

"Company will be glad to cooperate and supply engineering advice without cost to find a satisfactory method to correct such unsatisfactory and disturbing conditions."

"The combination of low power factor and lack of diversity in the operation of room air conditioners is adversely affecting the quality of the company's service, and we are, therefore, notifying air conditioning manufacturers that units with full load power factors below 90% do not fall within the requirements as stated in service rule No. 2.21 quoted above.

Jan. 1955 Deadline Set

Interim Policy

"We realize that until the manufacturers take steps to improve the performance of motors used in their room air conditioners or to provide self-contained capacitors for power factor improvement, few present models will meet the foregoing requirements. Therefore, we will postpone enforcement of this service rule with respect to air conditioning equipment until suitable designs become generally available but not beyond Jan. 1, 1955.

"There are certain definite benefits which will accrue to the industry as a result of manufacturers taking steps to provide equipment that will conform to the foregoing electric service requirements; namely:

How Customer Benefits

A. Benefits to the Customer

"1. Improved voltage at the appliance outlet resulting in better and more efficient operation of the room air conditioner and better television reception.

"2. Possible avoidance of additional wiring costs. This would be due to the fact that manually controlled room air conditioners with starting currents of 46 amperes or less and running currents of 12 amperes or less could be connected to existing 15-ampere, 120-volt branch circuits; and manually controlled units with starting currents of 46 amperes or less and running current of 16 amperes or less could be connected to 20-ampere, 120-volt branch circuits and still be in compliance with the provisions of the National Electrical Code.

"3. Ability to carry some load in addition to room air conditioners on such 120-volt circuits.

"4. Reduced electrical loss in house wiring.

ATTENTION FOREIGN BUYERS

We solicit your inquiries for refrigeration and air conditioning supplies and equipment.

LEADING BRANDS
LOW PRICES
PROMPT SHIPMENT

Scientific & Industrial Sales Co.
810 Broadway, New York 3, N. Y.

How Mfr., Distributor, Dealer Benefit

B. Benefits to Manufacturer, Distributor, and Dealer

"1. Increase in number of sales that can be made as a result of fewer wiring changes being required.

"2. Increase in customer satisfaction with your product, enhancing your reputation and prestige and bringing you repeat and customer referred business.

"3. Decrease in service calls and reduction in calls which are not the fault of the equipment itself.

"4. Reduced possibility of claims and damage suits.

"5. Increase in your profits as a result of more sales, fewer complaints, less returned merchandise.

"6. Higher sales ticket prices. You will sell power factor correction embodied in the unit at a profit instead of forcing others to furnish it or the customer to provide special circuits and other wiring changes, in many cases thus bypassing you as an element in the distribution."

2nd Million-Dollar Order Inked by Mitchell; Total Orders Rise to 400,000

CHICAGO—In a year that promises to break all records in sales of room air conditioners, Mitchell Mfg. Co. recently signed its second million-dollar order, the company announced.

The order for the 1954 line of room air conditioners was placed with Mitchell by Burford Distributing Co., St. Petersburg, Fla.

Present at the signing were S. S. Burford, president, Burford Distributing; E. A. Tracey, vice president in charge of Mitchell's air conditioning division; Herb M. Rose, Mitchell's Florida district sales manager; and R. L. Legg, vice president, and Bryce O'Keefe, sales department, Burford Distributing.

Orders for 400,000 room air conditioners have been received thus far this year by Mitchell, representing a total in retail sales of \$180,000,000.

Perfection Appoints New

Air Conditioning Distributors

CLEVELAND — Perfection Stove Co., which recently entered the room air conditioner field, has announced the appointment of distributors of both residential and commercial room air conditioners.

The commercial division has been named the Ohio Air Conditioning & Heating Co., Cleveland, and Perfect Aire, Inc., of Cincinnati, as distributors.

The furnace division has named the Manufacturers Supply Co. of Youngstown, Ohio.

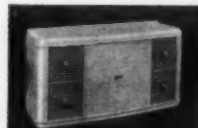
Distributors appointed by Perfection's appliance division are A. C. Rochat Co., Knoxville, Tenn.; J. E. Gram Refrigeration Co., East St. Louis, Ill.; Youngblood Plumbing & Heating Supply Co., Paducah, Ky.; Fort Wayne Air Conditioning Co., Fort Wayne, Ind.; Fuelgas Corp., Chester, N. Y.; H. M. Tower Corp., New Haven, Conn.; and Allied Air Conditioning Appliance, Wilmington, Del.



MODEL B75MR. Magnificent new $\frac{3}{4}$ -hp. York Heat-Pump Room Air Conditioner. Cools when it's hot, warms when it's chilly—at the turn of a dial—automatically maintains personal comfort! PLUS... 17 other beautiful 1954 models, including...

York
refrigeration
air-conditioning

Headquarters for Mechanical
Cooling Since 1885



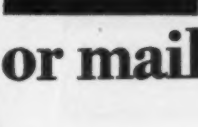
MODEL B30. Sensational low-priced $\frac{1}{2}$ -hp. window model!



MODEL A75R**
Beautiful $\frac{3}{4}$ -horsepower window model.



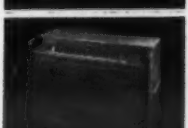
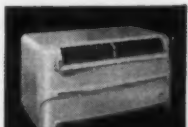
MODEL B50S. $\frac{1}{2}$ -hp. window model. Compact, tamper-proof.



MODEL B100CMR*. Luxurious 1-hp. window console conditioner.

MODEL B100MR*
Handsome 1-hp. Heat-Pump Room Air Conditioner.

*Including Heat-Pump and Automatic Personal Comfort Balancer.



**Including Heat-Pump.

York Corporation, York, Pa.

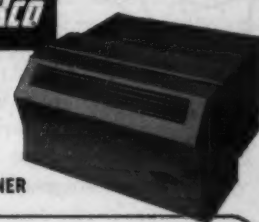
Gentlemen:
Please rush me complete information on York 1954 Room Air Conditioners and the York Franchise. No obligation, of course:

Name _____
Firm Name _____
Address _____
City _____ Zone _____ State _____

or mail this coupon today!

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WINDOW
TYPE
ROOM
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UNITED STATES
AIR CONDITIONING CORPORATION
MINNEAPOLIS 13, MINNESOTA

Stewart Lauer Re-Elected President of York Corp.

YORK, Pa.—Stewart E. Lauer was re-elected president of York Corp. during the annual meeting of the company's board of directors held here recently.

He was first elected president of the firm in 1940.

At the same session the following officers were re-elected: John G. Bergdoll, Jr., vice president and general works manager; John R. Hertzler, vice president and general sales manager; Rodney F. Lauer, vice president, engineering and research; J. Keith Loudon, vice president and assistant to the president; Donald M. Magor, vice president and controller; Marshall G. Munce, vice president, trade relations; and William F. Lynne, secretary and treasurer.

Charles A. Barnes was re-appointed assistant secretary and assistant treasurer while Carl W. Fenninger, Jr., was re-named assistant secretary.

At the annual meeting of the stockholders held prior to the meeting of the board of directors, William J. Meinel, president of Heintz Mfg. Co., George S. Munson, partner in the law firm of Townsend, Elliott & Munson, and Robert W. Wolcott, chairman of the board of Lukens Steel Co., were re-elected directors to serve for three years.

JUST ASK US

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Sherer-Gillett Sales Hit Record High In 1953

MARSHALL, Mich.—Sales of Sherer-Gillett Co. in 1953 climbed to a new high, J. H. Collidge, president, reported to stockholders at the annual meeting held recently in Highland Park, Ill.

He indicated that with every sign pointing to continued good business during 1954, the company expected no letdown in volume.

At the meeting, the following directors were re-elected: L. O. Bower, R. E. Church, and Coolidge, all of Marshall; Fred A. Goehler, Seattle, Wash.; A. W. Sherer, Chicago; R. D. Sherer, Winnetka, Ill.; and R. P. Sherer, Highland Park, Ill.

At the organization meeting, officers were also re-elected, with R. P. Sherer as chairman of the board; Coolidge, president; Bower, vice president and assistant to the president; G. E. Ruddock and C. B. Butler, vice presidents; Carl F. Greene, treasurer; Church, secretary; and Dorothy Kleindinst, assistant secretary.

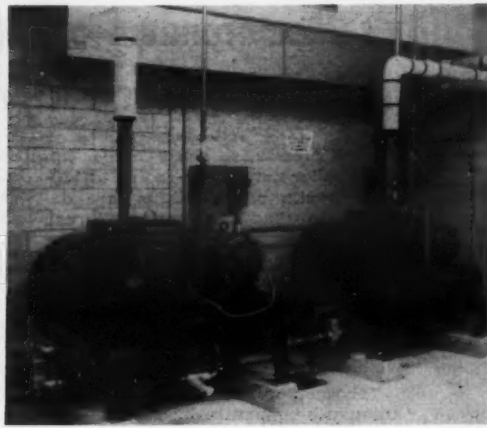
Adkins Heads Quality Control at Bush Mfg.

WEST HARTFORD, Conn.—Bush Mfg. Co. here has announced the appointment of D. L. Adkins as head of the company's quality control department.

Prior to his present position, Adkins was a Bush representative in Washington, D.C., working with government defense agencies on applications and specifications of refrigerating equipment.



(LEFT) Cooler for new plant of Tennessee Sausage Co. maintains 28° and low humidity to solve hitherto baffling storage problem. (CENTER) Tecumseh unit at left provides air conditioning for



entire plant; unit on right, with Thermobank above, handles cooler. (RIGHT) Air-handling unit in corner holds room at 65° for process and comfort cooling. (Photos by Al Polancy.)

'Southern Style' Sausage

Refrigeration, Air Conditioning Provide Low Temperature, Humidity Necessary To Successfully Process, Store Pork Specialty

ECORSE, Mich.—In five years Sam and James Blackwell have developed an amazing business here supplying "southern style" sausage to the many Detroit area residents who once made their home below the Mason and Dixon line.

But these owners (father and son) of the Tennessee Sausage Co. did not credit any of their success to refrigeration. In fact, they had become so discouraged with previous cooler room installations they wouldn't even sign a contract or make an advance

payment for the job in their new building.

However, Al Polancy, sales engineer for Western Refrigeration in Detroit, had enough confidence in the layout he devised that he took the job on this basis anyway.

HEFT OF EQUIPMENT IMPRESSED SKEPTICAL CUSTOMER

"As soon as the job started and Sam Blackwell saw the heft of the equipment we were going to install, he willingly made an advance payment and later paid us in full as soon as the system was completed and tested," Polancy says.

"One of the difficulties had been that Blackwell knew he had a problem but he didn't know exactly what the crux of the problem was, not being a refrigeration man," Polancy explained.

"After studying the process we reached the conclusion that he had to maintain temperature of 28° F. and low humidity. I told him we could solve his problem if he wanted to pay the price."

In the Tennessee Sausage Co. processing methods, the cooler room serves a dual function. First, it holds the pork under refrigeration prior to processing.

Preparation of this "old home town" product involves mixing the pork with selected spices, grinding it, and then packaging it in cotton bags, a special wax paper wrap being placed immediately around the sausage. The bagged sausage is then returned to the cooler where it is held until picked up by route drivers

for delivery to stores and super-markets.

"The big problem," commented James Blackwell, the son, "was that the cloth bags absorbed moisture badly. With this new cooler, that doesn't happen."

The new building, which the firm occupied in November, 1953, measured 60 by 80 ft. in size and is completely air conditioned, with the exception of the cooler. Cooler room measures 12 by 55 ft. and is insulated with 4 in. of cork all the way around.

When he first went to work on the job, Polancy recalls, "we got together with Jim Duffy of Lee Equipment, parts wholesaler here, and figured a Kramer Trenton Thermobank system to hold 40,000 lbs. of meat at 28° F. with low humidity. The finished job has actually held over 50,000 lbs. at the desired conditions."

Low-side equipment for the cooler consists of two large Kramer blower coils suspended from the ceiling at the center. These coils are spaced 8 ft. apart and blow in opposite directions towards either end of the room.

ROOM TEMPERATURE VARIES ONLY 1/2° FROM 28° DESIRED

Single thermostat which controls operation of both coils is located between the coils where it responds to the air returning to the blower units. This holds room temperature to within 1/2° either way of 28° F., according to Polancy.

"Having the coils close together like this gives good coverage of the room and groups the refrigerant,"

(Concluded on next page)

Your No.1 DEMAND...
the CONDENSER must be

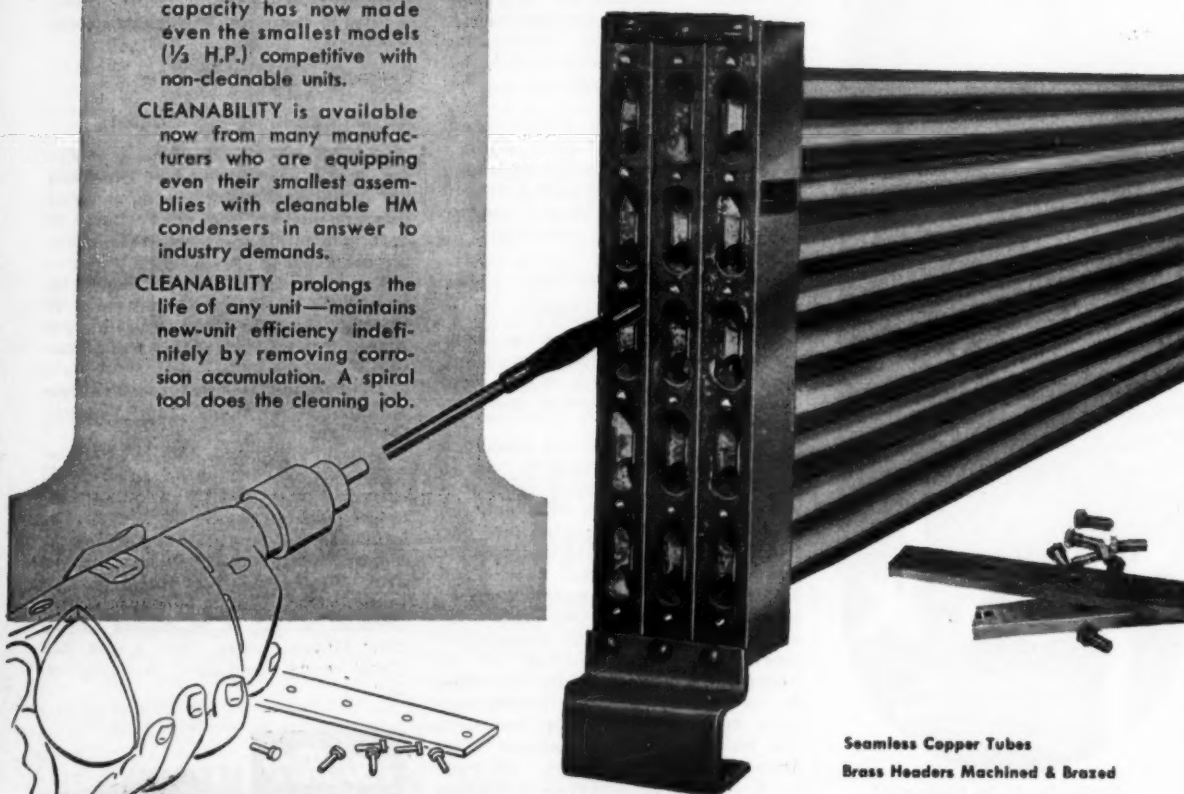
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Why not insist that your next unit have a CLEANABLE water-cooled condenser?

Especially since leading manufacturers, one after the other, are recognizing the "must" advantages of accessibility to cleaning and are equipping their units accordingly.

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enables you to recover new-unit efficiency and thus maintain 100% economical operation indefinitely.

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MOST METALS

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Commercial Refrigeration

Sausage Plant Refrigeration System --

(Concluded from preceding page)

drain, and electric lines conveniently," he adds.

Immediately outside the cooler is the 7½-hp. Tecumseh condensing unit and the Thermobank proper which permits automatic defrosting of the coils.

The temperature of 28° is extremely important for this application because a higher temperature would permit the pork to "run," that is, bleed, he pointed out.

Clay tile is employed on the walls of the cooler as in the rest of the establishment, the ceiling being finished in black mastic covered with two coats of aluminum paint.

Installed beside the condensing unit handling the cooler is another Tecumseh machine, a 10-hp. job for the air conditioning installation. The large processing room and all the offices of the building are air conditioned.

OWNER ASKED FOR AIR CONDITIONING

"When we were getting started on the job," Polancy comments, "the owner told us, 'you might as well put in air conditioning now; we'll need it eventually anyway so we'd better put it in at the beginning.'"

A large Kramer air-handling unit is mounted at the ceiling in one corner of the processing room. In addition to providing comfort cooling for the employees this is also intended to prevent temperature of the pork from rising too high during the processing.

This unit was sized to hold the room at 55° F., but, according to Polancy, it will now be operated to maintain a 65° F. temperature here.

"The Tennessee Sausage processing setup is now so rapid that the meat is out of the cooler only one half hour. Thus we don't need so low a temperature," he explains.

For the offices, small Betz ceiling-mounted coils are used. The solenoids which control these were mounted on the inside of the coil to prevent any condensation getting on the blower and thence into the room.

EXPOSED LINES HELD TO MINIMUM

Each of the coils is individually controlled by a thermostat, and all the refrigerant lines were carried above the ceiling to keep exposed lines to a minimum.

Actual installation of the cooler and air conditioning equipment was subcontracted to James Phillips of Allen Park Refrigeration.

One feature of the sausage processing of which Polancy is especially proud are the racks he de-

signed to speed up the operation.

It was the owner's original idea to install shelves in the cooler. Supermarket basket carts would then be used to wheel the packaged sausage into the cooler where the packages would be put on the shelves until picked up by drivers.

It was suggested instead that racks equipped with shelves and wheels could be used instead of shelves. These racks are loaded in the processing room and then wheeled into the cooler, each rack being loaded for a particular route driver and tagged with his name. The driver then merely wheels his rack (or racks) out to the truck loading dock.

"This arrangement has saved so much unnecessary labor that the racks will pay for themselves in six months, we find," Polancy declared.

Each rack is 31 in. wide by 62 in. long and has four removable shelves, each shelf is capable of holding 500 lbs. The racks are made of angle iron and are fitted with large, heavy-duty casters.

Milton Schwartz Will Head N.Y. CRDA Chapter

NEW YORK CITY—Milton Schwartz of S & M Schwartz & Co., Bronx, N. Y., has been elected president of the metropolitan New York Chapter of the Commercial Refrigerator Distributing Association.

He replaces Robert J. Wischusen of Engineering & Refrigeration Inc., Jersey City, N. J.

Sol Haar of Mann Refrigeration Supply Co., New York City, was elected vice president, replacing Schwartz, and Martin Annapolen of G & H Refrigeration, Bronx, was chosen secretary-treasurer, replacing Haar.

Refrigeration Helps Bakery To Level Off Production Rushes

ST. LOUIS — Installing a custom-built, 12-door reach-in refrigerator in the cake-baking department has offered a lot of advantages to William Ellerbrock, president of Ellerbrock Bakeries, here.

Ellerbrock operates a headquarters bakery in downtown St. Louis which serves various units in residential neighborhoods. Much of the heavy cake volume, is concentrated on Friday and Saturday.

Because the weekend cake-baking load normally comes when demand is heaviest for bread, rolls, cookies, and specialty pastries, Ellerbrock turned to refrigeration to help produce a large percentage of the cakes in advance of the weekend rush. This is done during slack time Monday, Tuesday, and Wednesday. Even though the downtown plant was equipped with a large, walk-in refrigerator, there was insufficient space to cope with normal volume.

Result was the all-aluminum, 12-door refrigerator built to Ellerbrock's specifications. The unit will permit sharp-freezing of 2 and 3 layer cakes which can be held for as long as a week, without loss of flavor or appearance. Popular yellow cakes, lemon cakes, standard white types, specialty nut cakes, etc., are produced on a weekly schedule which in turn has been based on sales records for the previous week and compared sales with for the same week a year ago.

Each compartment in the refrigerator holds 10° F. temperature. Compartments are numbered from 1 to 12, each number representing a specific type of layer cake. A glance into the interior takes inventory and the cake-baking crew works early in the week to fill individual compartments according to schedule.

Saving in valuable time at the end of the week has been an important cording to Ellerbrock, and with a large reserve of cakes on hand, it is never necessary to disappoint a customer.

Invention Exhibit, Parley Will Be In Cleveland

CLEVELAND—The nation's inventors will have an opportunity to make a bid for a profitable recognition of their "brain children" at an Invention Exhibit & Conference May 3 at the Cleveland Engineering Society.

In addition to an exhibit of operating and non-operating units or models which are available for leasing, licensing, or sale, an afternoon and evening program of talks on invention will be given.

Inventors having a practical product or process are invited to submit patent papers (not the originals), or resume, and a commercial description, if available, to the Invention Conference Group of the Cleveland Engineering Society, 2136 E. 19th St., Cleveland 15, Ohio, not later than April 1. Non-patented items are not acceptable for consideration unless submitted with a disclosure form obtainable from the society.

Lynch, Servel Area Mgr., Dies After Heart Attack

DALLAS—A. W. Lynch, district manager for Servel, Inc. here for 20 years, died at his home recently following a heart attack. He was 63.

Just prior to his death, Lynch had been promoted to merchandising counsellor for Servel's southwestern region. He is survived by his widow, two daughters, a brother, and three sisters.

HERE'S REFRIGERATION AT ITS Very Best The Famous PUFFER-HUBBARD LINE

* LIFETIME PORCELAIN or STAINLESS STEEL FINISH * 3" FIBERGLASS INSULATION * PATENTED "GRAD-U-MATIC" AIR CONDITIONING * SAG-PROOF DOOR CONSTRUCTION * TUBULAR ELECTRIC-WELDED STEEL FRAMES * SOLID OR TRIPLE THERMOPANE GLASS DOORS * AUTOMATIC SELF-DEFROSTING FREEZING SYSTEM * UNDERWRITERS APPROVED



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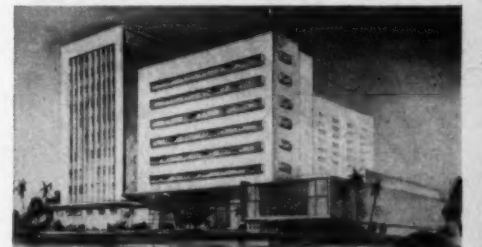
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Empress Hotel, Miami Beach, Florida



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Only J-E advanced design solenoids meet these requirements. Their amazingly simple design has only two moving parts — the main diaphragm and the plunger. There is no impact action or loose mechanical linkage to cause noisy operation.

This permanently quiet operation is just one of the many features that make J-E solenoids superior to any solenoid you've ever used. For complete information on the many ways J-E solenoids can save you time and trouble in controlling Freon, brine, ammonia, steam, water, air and gas, call your wholesaler or write:

All J-E Solenoids are
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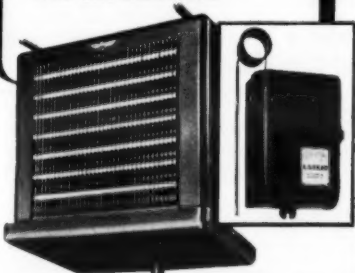
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Home Air Conditioning Isn't Too Expensive

An air conditioned home isn't extravagant!

This editorial is based on an analysis of 174 interviews with owners of two-years-ago installed year-round home air conditioning equipment.

Honestly, we believe this survey is significant. However, readers will have to wade through a few "details" to "catch" that significance. We give you:

Fourteen per cent of the replies indicated that a furnace installation was made at the same time when air conditioning entered the home.

Fifteen and one-half per cent of the replies were made by doctors, dentists, and other persons who are responsible for the conduct of business in a suite of offices adjacent to their homes.

Highest price recorded was from Dallas—\$5,000 plus. Lowest price was reported by an Omaha builder who paid \$600 for his home air conditioning unit.

The largest single price bracket ranged from \$1,500 to \$2,000. Sixty per cent of the owners bought in the \$1,000-\$2,500 range. Sixty-one per cent of the air conditioned homes contained five, six, seven, or eight rooms.

Here are interesting replies to those 174 interviews:

Questions:

1. Do you think your air conditioning equipment is a good investment?

YES	81%
NO	8%
NO ANSWER	11%

They'll Do It Every Time Jimmy Hatlo



- What do you like best about air conditioning?
 - 19% Efficiency, dehumidification, dependable heating
 - 26% Cooling
 - 21% Healthy atmosphere
 - 2% Heating
 - 16% General reasons: quietness, dependability, size, economy, etc.
 - 16% Did not answer this question
- Is your air conditioning used for:
 - 74% Comfort
 - 3% Business
 - 20% Both
 - 3% Did not answer
- How many rooms are air conditioned?
 - 13% Five
 - 17% Six
 - 17% Seven
 - 14% Eight
 - 14% Nine or more (includes doctor's, dentist's offices)
 - 19% All—General statements, small stores
 - 6% Did not answer this question
- Cost of installations?
 - 5% \$500-\$1,000
 - 21% \$1,000-\$1,500
 - 24% \$1,500-\$2,000
 - 15% \$2,000-\$2,500
 - 11% \$2,500-\$3,500
 - 3% \$3,500-\$4,000
 - 5% Over \$4,000
 - 16% Could not remember
- What is the monthly operating cost for the cooling season?

Electricity

 - 29% Under \$10
 - 13% \$10-\$15
 - 11% \$15-\$20
 - 5% \$20-\$25
 - 4% \$25-\$30
 - 5% Over \$30
 - 33% Did not keep records

Water

 - 36% Under \$10
 - 10.5% \$10-\$15
 - 8.5% \$15-\$20
 - 5% Over \$20
 - 7% Did not reply to water costs
 - 33% Did not keep records
- How did you first learn about all-year air conditioning?
 - 23% Personal investigation
 - 26.5% Through dealers and salesmen
 - 15.5% Through advertising
 - 5% Model homes, builders' shows, etc.
 - 30% Did not recall
- Do you have any suggestions as to how all-year air conditioning could be improved?
 - 15% Better, lower cost service
 - 7% Lower initial cost
 - 4% Better cooling
 - 2.5% Better, faster parts service
 - 10.5% Better installation, design
 - 22% Other reasons, including more quietness and water conserving measures
 - 39% Satisfied with present performance

You can figure out your own conclusions from these facts, and use them in selling.

OUR conclusions add up to the fact that complete home air conditioning is highly satisfactory, and that those who sell it honestly should reap a rich harvest.

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OF TONNAGE
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Time, Mileage Charges Surveyed

Contractors' Time Rate Averages \$5.25 Per Hour In Southern California Area

LOS ANGELES—A survey among members of the Refrigeration and Air Conditioning Contractors Association of Southern California, Inc. indicates that the average time rate charged by them is about \$5.25 per hour, Henry B. Ely, executive secretary of the association reported recently.

He said the rates varied from a high of \$5.75 per hour to a low of \$4.50 per hour.

There is considerable variation in the charge for mileage," he said, "varying from five cents a mile to 12 cents a mile, although some make a flat charge of 75 cents per round trip. The average seems to be about 10 cents a mile."

Ely said the survey was made following adoption of a new union contract that changed the allowance

for travel time and expense used in the previous contract.

"The payment for the first mile to the fortieth mile," Ely said, "has been changed in order to be more realistic. Under the old contract after 22 miles the contractor was required to pay subsistence plus a travel allowance."

"Under the new contract the payments are levelled off with the abolition of the free zone, increasing the zone circle to 40 miles. Travel time as such will be paid for at the rate of nine cents a mile beyond the 40-mile zone and handled as a wage account."

"This establishes the normal rate of travel at an average of 35 miles per hour and is a change of approach to the problems raised by the Fair Labor Standards Act."

Gilbert Represents Marlo In Northeast Texas Area

ST. LOUIS—Marlo Coil Co., manufacturer of air conditioning and heat transfer equipment, has announced the appointment of Gilbert Engineering Co., Dallas, as Marlo representative in the northeast Texas Area.

Leslie S. Gilbert, president of the Texas firm, has spent 27 years in the heating and air conditioning field in Texas. A graduate of Montana State College, he is past president of the north Texas chapter, American Society of Heating and Ventilating Engineers.

Hauber To Direct Sales For Thermal Supply Co.

HOUSTON, Texas—W. F. Hauber has taken over the general sales management of Thermal Supply Co., refrigeration and air conditioning parts and supplies wholesaling firm with stores in Houston, Beaumont, and Galveston.

Hauber will direct all sales and sales promotion and advertising for the firm, according to E. K. Peterson, who is head of the Thermal Supply Co.

Hauber has been connected with the refrigeration industry for more than 20 years, starting with the refrigeration department of Steel Sales Corp., Chicago.

Since 1945 he had been sales manager of Koolaire, Inc., York distributor in St. Paul, Minn.

Navajo Agents Renamed The Marshall Company

CHICAGO—Madden Brass Products Co. here announced that its representatives, Jim and Ned Marshall, formerly known in the company's Denver territory as Navajo Agents, have changed their name to The Marshall Co.

The firm will continue to serve as representatives, calling on wholesalers, distributors, and manufacturers in Colorado, New Mexico, Arizona, Utah, Wyoming, Idaho, Montana, Kansas, Nebraska, western parts of Missouri, Iowa, and El Paso, Texas.

Jim and Ned are natives of Colorado and both attended Colorado university.

The brother team also announced that it now has a resident representative in Salt Lake City and another man is being added so the company will be able to give complete coverage in the Rocky Mountain territory on the Madden line of brass fittings for the L.P. gas, automotive, refrigeration, and allied trades.

Baltimore Aircoil Co. Names 5 Representatives

BALTIMORE—Baltimore Aircoil Co., Inc. has announced the appointment of five representatives.

The representatives and their territories are:

George V. Zintel, Chicago—northern Illinois and Indiana; I. Ben Kagey & Associates, Atlanta—Georgia; J. L. Bodine & Associates, Webster Groves, Mo.—southeastern Missouri, northern Arkansas, and southern Illinois; James C. Gant, Sr., Gant Sales Co., Dallas—Texas; and John H. Keller, J. H. Keller Co., Detroit—southeastern Michigan.

Pacific Scientific Ups Davenport to Sales Post

SAN FRANCISCO—Thomas Davenport has been appointed chief sales engineer of the Air Conditioning Div. of Pacific Scientific Co., according to an announcement by Decker McAllister, president.

He will be stationed in San Francisco and will direct air conditioning activities at all four Pacific Scientific Co. Pacific Coast offices.

He has been associated with the company since 1946 and in recent years has been manager of the San Francisco Air Conditioning Div. Previously he was head of his own wholesaling.

Servel Names Smith East Central Manager

EVANSVILLE, Ind.—Appointment of William G. Smith as district manager for the east central territory was announced by John F. Zubrod, product manager of the commercial refrigeration division of Servel, Inc. Smith will make his headquarters at Cuyahoga Falls, Ohio. He will move there from Orelana, Pa.

He has been a member of the commercial refrigeration division's field service organization since 1951. Prior to that he was employed in production departments at the Servel factory.

Charles M. Heathman, who has been district manager in the east central territory, has been transferred to the west central territory, with headquarters in Chicago.

New Solder Cleans, Tins, Sweats In One Operation

NEW YORK CITY—A paste-type 50-50 tin-lead solder that is claimed to speed sweat soldering and tinning operations has been placed on the market by Hercules Chemical Co., Inc. here.

Packaged under the name of "Hercules Swif Solder," it is said to save much time over conventional solders "since it cleans, tins, and sweats in one operation."

"The flux in Swif Solder not only chemically cleans the surfaces to be soldered or tinned, but also allows the solder to flow freely to form a secure bond," the company said. "The pre-cleaning and pre-heating necessary with other types of solder is eliminated; separate application of flux is also eliminated. Swif Solder is simply brushed on—heated—and the job is complete."

"Joints and tinned surfaces made with Swif Solder perform at least as well and last as long as those prepared with other forms of 50-50 solder. A leading independent laboratory reports that Swif Solder withstands pull of 2,000 lbs. on 1/2-in. copper sweat joints."

"The same laboratory, in a hydrostatic pressure test, prepared several 1/2-in. sweat joints with Swif Solder. At a pressure of 3,600 p.s.i., the tube burst, but Swif soldered joints were not affected."

The solder is packaged in 3 oz. trial size (on a money-back guarantee), 1/2-lb., 1-lb., and 3-lb. containers, and is available at plumbing wholesalers.

'Stab-lok' Circuit Breaker Designed for Homes with Air Cooling, Large Range

NEWARK, N. J.—A new "Stab-lok" circuit breaker device, the AB-192, designed for homes with an air conditioning unit or an extra large kitchen range, is now being produced by Federal Electric Products Co.

The AB-192 is designed particularly for applications where a large double-oven range of very high kilowatt consumption requires main circuit breakers greater than 50 amperes or where large single phase compressors are being used for air conditioning.

The AB-192 features a sequence bussed branch panel making it possible to use 10 single pole or five double pole branch circuit breakers, controlled by one 50-amp main breaker, according to the company.

"Four additional 50-amp main breakers may be used for major appliances such as dryers or other high wattage loads than can be served with a 3-wire circuit," the company said.

"By using a split-bus, five of the breakers in the lower compartment are parallel with the 100-amp main breaker in the top section. The main lugs to which the line is attached have a capacity of 200 amperes."

"The new AB-192 stab-lok circuit breaker device has six operating handles to disconnect service, designed in conformance with the National Electrical Code. Completely wired, the device is constructed to fit between studs for easy installation."

YOUR GREATEST ASSET

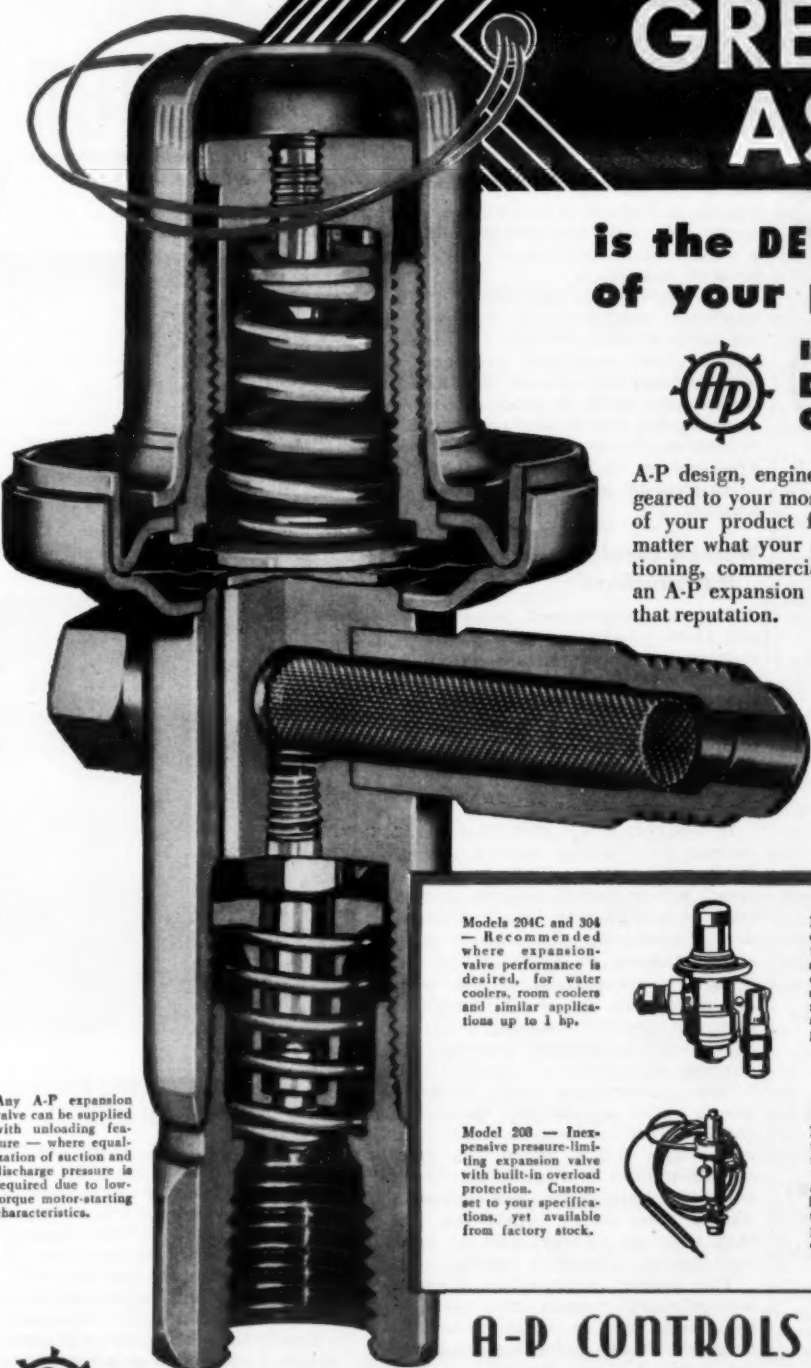
is the **DEPENDABILITY** of your product . . .



Insure It with **DEPENDABLE Controls**

A-P design, engineering and manufacturing are all geared to your most valuable asset — the reputation of your product for *dependable* performance. No matter what your application may be — air conditioning, commercial or low-temperature — there's an A-P expansion valve that will help you maintain that reputation.

More than this, unique design and advanced engineering have made A-P thermostatic and automatic expansion valves favorites with dealers and service engineers. You can cash in on this wide acceptance when you specify A-P on your product.



Models 204C and 304 — Recommended where expansion valve performance is desired, for water coolers, room coolers and similar applications up to 1 hp.

Model 200 — Inexpensive pressure-limiting expansion valve with built-in overload protection. Custom-set to your specifications, yet available from factory stock.

Model 206C — Exceptionally compact thermostatic expansion valve. Liquid charge. Factory preset to your requirements. Non-adjustable to prevent tampering in the field.

Model 104 — Versatile custom-built automatic expansion valve. A highly adaptable unit ideal for high-production, fractional-horsepower applications where low cost is major factor.

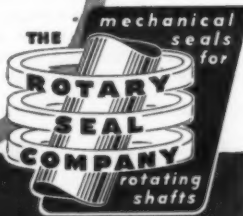
Any A-P expansion valve can be supplied with unloading feature — where equalization of suction and discharge pressure is required due to low-torque motor-starting characteristics.

ROTARY SEAL

Replacement Units

For Commercial, Semi-Commercial, Air Conditioning and Home Refrigerator Compressors . . . proven by 23 years of outstanding performance. Units available for all standard makes.

Easy to install
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Women Can Help You Sell

- They Sell 'Product-Use', Not 'Nuts and Bolts'
- Can Spot Chances To Sell Additional Appliances
- Can Handle Customer Complaints
- Can Cut Down on Nuisance Calls

CHICAGO—Appliance dealers can increase their volume by employing women on the sales floor because they are much better than men at telling and showing homemakers what a product will do in the home.

Mrs. Jessie Cartwright, home service director of Norge Div., Borg-Warner Corp., expressed that opinion at the annual convention of the National Appliance & Radio-TV Dealers Association.

But, she cautioned, women should not be put in competition with men on the sales floor. Rather, they should be used to supplement the selling efforts of salesmen, she advised.

Mrs. Cartwright said selling appliances is a "natural" for women because they use these "women's products" and know their value in making housework easier.

"Women may not be so glib with sales talk; they may not be so efficient in whipping out the order

blanks; they may not know all the answers about merchandising and buying—but just give them a chance at telling and showing other women what a good appliance will do, and they'll sell them," she asserted.

Appliance salesmen tend to lean on the "nuts and bolts" story, telling the prospect about the compressor, the amount and grade of steel used, the coils, etc., according to Mrs. Cartwright.

How Will It Look? What Will It Do?

But, she stressed, the housewife doesn't care about construction details; she knows the appliance will work properly. She's thinking about how it would look in her home and what it would do in saving her work, the speaker said.

This is what happens many times when a woman goes into a store to buy a range, Mrs. Cartwright told the dealers: The salesman says, "Look at that porcelain!" and then bangs on it. The prospect cringes. The salesman lights a bonfire on top of the range to show how tough the finish is, or he pulls down the oven door and stands on it.

"This doesn't impress a woman," the speaker declared. "She's not going to use the range that way in her home."

On the other hand, Mrs. Cartwright claimed, a good woman sales person would be telling the prospect about the appearance and use values of the product—the kind of information she wants. Of course, the speaker added, a saleswoman must know how the product operates.

Mrs. Cartwright pointed out that appliance manufacturers believe in the value of women in this "women's business." She noted that every major manufacturer has a staff of trained women who work on production, developing new ideas; test every product for convenience; and decide shelf-arrangement in refrigerators, rack arrangements in ovens, controls on washers, etc.

Women Should Supplement, Not Supplant

And, she emphasized, women can sell these products, too, if used to supplement—not supplant—salesmen.

Mrs. Cartwright said the basic qualifications for a woman sales person are: She should be endowed with enthusiasm, loyalty, and a desire to work, and she must be personable—a woman who gains the confidence of other women.

In this connection, Mrs. Cartwright warned the dealers against hiring "a Marilyn Monroe with a mink coat." A housewife's reaction to this type of saleswoman would be, she said: "What does that hussy know about washing or cooking!"

After a woman is hired, the dealers were told, she should be given thorough product training, and an opportunity to actually use the appliances she sells.

Mrs. Cartwright said dealers should make use of the "personal" characteristic of women that men lack. "You sell a woman on your appliance lines and she'll sell them with full enthusiasm and complete loyalty," she stated. "Make her feel that she's an integral part of your organization, that she's needed."

The proper product-use story a well-informed woman can tell will cut down 30% on nuisance service calls, the Norge home service director asserted.

In addition to selling appliances on the floor, Mrs. Cartwright said, a saleswoman should be allowed to follow-up on sales. "She'll see more chances to sell other appliances than you would in a week," the dealers were told.

And, the speaker noted, women can handle customer complaints, too.

Hollywood-Style Promotion Brings Hundreds Into Cooking Contest

'Cook-Off' Gives Dealer Chance To Demonstrate Major Appliance Lines

MIAMI, Fla.—To spark public interest in all the lines it distributes, Major Appliances, Inc. here recently conducted a state-wide series of cooking contests with finalists from all regions participating in a big "cook-off" at Dinner Key auditorium here.

Dan Rowlands, head of Major Appliances, engaged Dick Stern Associates, Florida public relations firm, to assist in publicizing, planning, and promoting the contests.

Representing Amana, Grand, Easy, Motorola, and Fedders, Major utilized theater screen trailers, radio, television, newspapers, and direct mail, to pull traffic to dealers stores to get entry blanks.

Rowlands provided window streamers, banners, and posters for his dealers calling attention to the "prizes" being offered and giving the dealer a chance to demonstrate to the increased store traffic.

Theaters in the separate sections of Florida were used as headquarters for each preliminary and the 90 winning contestants were then invited to the Grand Finale at Dinner Key auditorium for the cook-off.

Here, each contestant whose winning dish had been prepared at home for the preliminary, was asked to actually prepare her recipe before some 6,000 cooking enthusiasts.

In the huge auditorium, 18



HOME ECONOMIST explains use of upright freezer during "cook-off" at Major Appliances, Miami.

kitchens, all with Grand ranges, were set up to accommodate the contestants and booths were conveniently placed throughout the hall to show other products in a manner similar to a home show.

From 11 a.m. until late in the evening, these booths were crowded with spectators who were shown the lines and given demonstrations. Spectators provided hundreds of leads as well as chalking up many actual sales during the day.

The ranges, upon which the contestants cooked, provided some 90 amateur chefs with the best demonstration of the Grand range ever possible, Rowlands pointed out.

A program was arranged to include demonstrations in home economics by Sara Wells (Amana), Rosemary Guerra (Easy), and Jean Montgomery (Grand) who were flown down here from their headquarters to take part in this promotion.

Following the demonstrations, a two-hour show, written and staged especially for the final contest, presented the outstanding features of all of the participating lines, complete with models, revolving stage, and major professional entertainment. At the end of the show, the winners were announced and presented to the audience.

REYNOLDS FABRICATING FACILITIES OFFER seven important savings TO APPLIANCE MANUFACTURERS

These photographs are representative of the tremendous Reynolds fabricating facilities . . . facilities that make possible seven basic economies to every appliance manufacturer who uses Reynolds Aluminum Fabricating Service.

Not shown are two equally important advantages that Reynolds offers manufacturers. One, quality and production control from mine to finished product. Two, experienced design and engineering service.

You'll see proof of the latter advantages—

along with proof of the seven basic economies pointed out in the photo captions—in each aluminum blank, roll formed shape, completed part or final assembly you get from Reynolds.

For your present appliance needs or for development work on future models, call on Reynolds today. Contact your nearest Reynolds office listed under "Aluminum" in your classified telephone directory or write to Reynolds Aluminum Fabricating Service, 2053 South Ninth Street, Louisville 1, Kentucky.



2 Reynolds REDUCES YOUR RAW MATERIAL INVENTORY

You get pounds of parts instead of pounds of metal when you use Reynolds Aluminum Fabricating Service. Like the appliance manufacturer who will receive the anodized aluminum washer tubs above, you can save, too, by cutting out that costly part of your metal inventory that does not go into finished parts. Remember—over 30 Reynolds plants in 18 states assure a steady flow of parts to you!



3 Reynolds RELEASES YOUR VALUABLE FLOOR SPACE

Basic appliance parts or trim for parts can be quickly and economically roll formed for volume users by Reynolds. Imagine the floor space required for roll forming machines and countless other equipment that Reynolds maintains. Imagine the floor space you can save in your plant—space you can put to profitable use—when you call on Reynolds Aluminum Fabricating Service to turn out your aluminum parts!



4 Reynolds ADDS TO YOUR CAPACITY WITHOUT INCREASING COSTS

Here, highest quality aluminum refrigerator evaporators are anodized on modern automatic equipment at one of the large Reynolds plants. The great variety of Reynolds specialized equipment enables you to obtain the economy of the machines best suited to your purpose, without making the tremendous capital investment in equipment and added plant capacity which would otherwise be required.

5

The above part is a typical example of the many products that Reynolds can produce for you.

REYNOLDS ALUMINUM F

BLANKING • EMBOSING • STAMPING • DRAWING • FORMING • RIVETING • ROLL

To Ease The Squeeze:**Accountant Suggests Tax Revision To Aid Small Businessman Making Instalment Sales**

NEW YORK CITY—The average small businessman engaged in making instalment sales is caught in a squeeze between the finance company and the Internal Revenue Service, according to an article published in the February issue of *The Journal of Accountancy*.

E. Roy Daniell, CPA, of Charleston, S. C., writing in the official publication of the American Institute of Accountants, declares that the tax rules are such that a dealer may find he has "prospered into involuntary bankruptcy."

Daniell explains that when a dealer has an arrangement with a finance company to purchase notes given by the dealer's instalment customers a reserve is often set up. This reserve is subject to charges for unpaid instalments and collection costs at the discretion of the particular finance company.

The dealer can make withdrawals from the reserve only when certain conditions are met, generally requiring the reserve to exceed a specified percentage of the outstanding unpaid balances on notes which have been acquired from him.

"Regardless of the manner in which these reserves are treated on the books," states Daniell, "the dealer is soon confronted with income tax problems. If he is one who takes the reserve immediately into income, he finds before very long that the government has all his cash and that

he is left only with some dealer finance reserves, which cannot buy food, clothing, and the necessities for life.

"If he omitted the reserve entirely from all records, the Internal Revenue Service soon discovers it and claims that he should have included these reserves with income all the time.

If the dealer took them as a finance deduction from income, he soon finds that this type of deduction is disallowed.

"The Internal Revenue Service should allow the dealer finance reserve to be deducted from income as a cost of doing business. Taxable income should be realized only when, if, and as funds are released by the finance companies, subject to unqualified withdrawal."

Portland, Ore. Firm Named Crosley-Bendix Distributor

CINCINNATI—The Robert L. Rice Co., Portland, Ore., has been appointed distributor for Crosley appliances, radio, and television, and Bendix home appliances for 30 counties in Oregon and five in Washington.

A factory branch has been handling the franchise since July. The Rice company has been the distributor for Emerson, Thor, and L. & H. franchises held previously.

Bendix Participation In \$500,000 Nationwide Orlon Fleece Promotion

CINCINNATI—Bendix Home Appliances Div., Avco Mfg. Corp., will participate in the \$500,000 nationwide promotion of the new Orlon fleece line of women's apparel being introduced by the House of Swansdown, Inc., Bendix officials announced recently.

"The Bendix-Princeton-Swansdown event is the most unique promotion in the history of the appliance industry," declared William A. MacDonough, director of merchandising and advertising for Avco's Appliance and Electronics Div.

Princeton Knitting Mills, Inc., which is also participating in the promotion, is the textile industry's largest producer of knit goods.

In leading department stores with appliance departments, he said, the Bendix Duomatic or a washer and dryer will be set up in the coat department together with a special display and demonstration kit and a live demonstrator.

In most such stores, he said, a coat display and laundering demonstration will also be set up in the appliance department.

Among leading department stores which have early promotions scheduled are: The H & S Pogue Co., Cincinnati; J. L. Hudson Co., Detroit; John Wanamaker's, Philadelphia; Jordan-Marsh, Boston; Bon Marche, Seattle; Hutzler Brothers, Baltimore; Macy's, Kansas City and San Francisco; Davison-Paxon in Atlanta; B. Altman, Lord & Taylor, New York;

Burdine's, Miami; Magnin's in California; Henry C. Lytton and Marshall Field, Chicago.

In specialty stores which do not have an appliance department, he added, the Bendix distributor will supply Bendix laundry units and a factory-trained demonstrator for live washing and drying demonstrations.

In thousands of other cases, the specialty shops will enter into a cooperative promotion with the leading Bendix dealer in the respective city. In such cases the Bendix dealer will feature displays of the coats and refer prospects to the apparel store while the latter will feature posters and other display material suggesting prospects or customers visit the appliance store for a live demonstration.

Bendix, MacDonough said, is making a vast array of special promotional material available to its dealers including mats for advertisements in local newspapers, hand-out literature, special fabric displays, special window displays, brochure or plan book, and special demonstration kit of Orlon swatches.

3 Distributor Salesmen Win \$1,000 Norge Prizes

CHICAGO—Three distributor salesmen were recently named winners of \$1,000 each at the climax of a three-month "Viking Club" sales contest held by Norge Div. of Borg-Warner Corp.

Grand prize winners were J. J. Golan, Mayflower Sales Co., St. Louis; C. E. Haight, Radio Distributing Co., Grand Rapids, Mich.; and B. C. Abney, Moore-Handley Hardware Co., Nashville, Tenn.

Golan met 301.8% of his quota to outstrip the field in his competition class composed of major city distributors. Haight, with a quota percentage of 330% in the middle-size city class, was high man for the entire contest. Abney scored 271.7% to lead the smaller city class.

Some 37 other salesmen shared nearly \$10,000 in cash prizes awarded to winners at the contest's end. These awards bring to \$30,000 the value of cash and merchandise prizes distributed to top distributor salesmen in 16 Norge distributor districts throughout the contest.

G-E Appoints Carl Bixby As Dryer Sales Manager

LOUISVILLE, Ky. — Appointment of Carl L. Bixby, Jr., as sales manager for automatic clothes dryers has been announced by E. M. Haines, marketing manager of General Electric's home laundry equipment department.

Bixby, who joined G-E in 1948 in a sales training capacity, had been sales training manager for the sales education programs and materials section of the Major Appliance Div. for the past six months.

A 1941 graduate of Lehigh university, Bixby served in the Air Force in Europe during World War II. After his discharge he helped produce sales and supervisory training films in New York City.

Detroit Distributor Picked To Handle 'Vornado' Line

DETROIT—O. A. Sutton Corp.'s appointment of Peninsular Distributing Co., here, as distributor of "Vornado" air circulators and air conditioning was announced recently by the latter firm.

At the same time, J. H. Ryall, general manager of Peninsular, announced plans for a concerted advertising and sales program for the eastern half of Michigan.

Norge Boston Distributor Adds Rhode Island Area

CHICAGO—Norge dealers in the Providence, R. I., distributor territory are now being served by Allied Appliance Co., 111 Berkely St., Boston, it was announced recently by the Norge Div. of the Borg-Warner Corp.

The new territory includes all of Rhode Island plus southern Massachusetts and eastern Connecticut. Allied already serves western Massachusetts, southern New Hampshire, and eastern Vermont.

Ralph S. Cron is president of the company and Charles Van Maanen is general manager.

Women's Round Table To Hold Annual Conference In N.Y. May 14 and 15

NEW YORK CITY—The first annual national conference of The Electrical Women's Round Table, Inc., will be held at the Sheraton Hotel in St. Louis Friday and Saturday, May 14 and 15, 1954, according to Mrs. Adelaide Fellows, Philco Corp., president of the organization.

The vice president, Miss Edith Ramsay, *American Home Magazine*, is general chairman of the conference. Miss Marguerite Dunn, Glasco Electric Co., is chairman of the committee on local arrangements. The two-day conference will be divided between educational workshop sessions and business sessions for officers of the various chapters of The Electrical Women's Round Table, Inc.

Miss Marion Ryan, Detroit Edison Co., is program chairman for the educational workshop scheduled for Friday, May 14. Mrs. Mary Held, Cincinnati Gas and Electric Co., is co-chairman. All representatives of the electrical industry, as well as teachers, extension workers, and other representatives of allied fields, will be welcome at the first day's session even though they may not be members of The Electrical Women's Round Table, Inc.

On Saturday, May 15, officers and committee chairmen of the fourteen chapters of The Electrical Women's Round Table, Inc., will hold simultaneous sessions to discuss organization business and operating procedure, followed by the annual business meeting of The Electrical Women's Round Table, Inc. National officers will be elected for the ensuing two-year term, and numbers of the Board of Directors will be elected to fill vacancies. The Saturday sessions will be open only to members of The Electrical Women's Round Table, Inc. and to invited guests.

Records Standardization A 1954 NARDA Objective

FORT WAYNE, Ind. — Records standardization, in order to give retailers firmer control of their business operations, will be a principal objective of the National Appliance & Radio-TV Dealers Association during 1954, Ken Stucky, NARDA treasurer and chairman of the Records Standardization Committee, announced recently.

He has asked that all committee members who served during 1953, when the program was first mapped out, be retained during 1954 to bring it to completion. They are Ward Davison, Seattle; Emerson Dole, Wichita; William H. Murray, Paoli, Pa.; Wallace Johnston, Memphis; and Harry B. Price, Jr., Norfolk.

Freezer Is 1,500,000th I-H Refrigeration Item

EVANSVILLE, Ind.—International Harvester's Evansville Works recently produced its 1,500,000th refrigeration product—a 14-cu. ft. vertical freezer.

In January, 1952, less than six years after production of the initial refrigeration product—a milk cooler—the millionth refrigeration unit was built, with the next half-million following in fewer than two years.

Harvester's Evansville Works currently produces 10 models of refrigerators (7.4 cu. ft. to 10.5 cu. ft.), four horizontal freezers (7 cu. ft. to 20 cu. ft.), two vertical freezers (9 and 14 cu. ft.), four room air conditioners (1/2 hp. to 1 hp.), one dehumidifier, four models of milk coolers, and two models of cotton picker drums.

Bixby Named Production Chief of New I-H Plant

MINNEAPOLIS — Stephen C. Bixby has been appointed operations manager of Minneapolis-Honeywell Regulator Co.'s new Appliance Controls division plant at Gardena, Calif., it is announced by E. M. Toussaint, general manager.

Bixby formerly was chief of mechanical design for the company's Heating Controls division, with headquarters in Minneapolis. As operations manager at the Gardena plant, he will be in charge of production and engineering.

**1 Reynolds CUTS YOUR SCRAP LOSS AND SCRAP HANDLING COSTS**

The aluminum blanks on the conveyor at left are ready to go to an appliance manufacturer. The scrap beside the press is remelted immediately right at the Reynolds plant. Thus Reynolds Aluminum Fabricating Service saves you—the appliance manufacturer—an average of 30% scrap loss and eliminates your scrap handling expense in sorting, storing and shipping.

FREE: 24 page "Catalog of Facilities" and 16 page "Appliance Parts" brochure. Write for your copies today.

**5 Reynolds CUTS YOUR MATERIAL HANDLING COSTS**

The cartons on the aluminum pallets above contain finished aluminum parts for another appliance manufacturer. This manufacturer is reducing his material handling costs by getting pounds of parts, not pounds of metal, from Reynolds Aluminum Fabricating Service. Reynolds also takes the problem of scheduling, material supply, labor and machine availability off his—and your—hands!

**6 Reynolds OFFERS YOU DELAYED MATERIAL BILLING**

You receive 100% of your aluminum in highest quality finished parts when you use Reynolds Aluminum Fabricating Service. And, as these parts are generally billed after assembly into finished products, no investment is tied up in raw metal. These parts, like the shells of the aluminum deep well cookers for ranges being buffed above, are available in a wide choice of finishes including color-anodized.

**7 Reynolds ELIMINATES YOUR REJECT COSTS**

Reynolds Aluminum Fabricating Service does away with your machine and labor production losses and reject expense because you pay only for finished, inspected parts. The conveyor inspection line above, where refrigerator door trays are carefully inspected before packing and shipping, is just one of the countless examples of Reynolds quality control from mine to finished product.

See "Mister Peepers" Sundays on NBC-TV. Consult local listing for time and station.

FABRICATING SERVICE



ROLL SHAPING • TUBE BENDING • WELDING • BRAZING • FINISHING

Portable 2-Part Freezer Aids In Amputations

**Closer Control Possible;
Comfort, Healing Increased**

INDIANAPOLIS—A small freezer into which a patient can put his foot or hand to freeze it prior to amputation has been developed by Robert C. Webber, president of the Webber Mfg. Co. here, and put to the test by Drs. Leo R. Radigan and Harris B. Shumacker, Jr. of the Indiana University Medical Center.

The mechanically refrigerated unit is reported by the doctors to contribute enormously to the comfort of the patient, to sharply reduce the care required from overworked nurses, and to cut from 12 to four hours the time required to freeze a limb. They have used it on 54 patients so far.

These are advantages gained over the former method of packing ice in a plastic and rubber boot around the infected limb.

The freezer consists of two parts. One is a refrigeration unit mounted in a small, portable soundproof cabinet which is placed beneath the patient's bed. An insulated tube leads to a small freezing unit which rests on the bed and into which the affected foot or hand is placed.

The freezing unit weighs less than 20 lbs. A thermometer is mounted upon it. Attached to the refrigerator is an automatic relay device for maintaining constant temperature and an easily adjusted control for selection of any desired temperature. A heavy felt pad closes about the ankle or



TWO-PART FREEZING UNIT. Lower cabinet contains refrigeration system. Top cabinet weighs less than 20 lbs.

wrist after the foot or hand has been placed into the freezer.

Webber, who specializes in the manufacture and sale of freezers and low temperature equipment, developed the foot freezer, as he calls it, about a year ago. The idea was suggested

to him by a Veteran's Administration maintenance man, who felt that there should be a better and more efficient way of refrigerating limbs than by packing them in ice.

Webber said that he was amazed when a check of the patent office revealed that no device for that purpose had been patented. Consulting with the two doctors, he found out what features they desired in a mechanically refrigerated unit and then went ahead and built one for them.

They have used the unit for many months and recently reported on their unit in a medical journal called "Surgery, Gynecology, and Obstetrics."

In their article, they pointed out that they had previously used the wet pack method of refrigeration and that they had discovered several definite disadvantages.

'Pack Method' Unsatisfactory

"The initial pain of cooling was often aggravated by the weight of the ice on the foot or hand," they wrote. "In spite of efforts to make the boot watertight and to provide for drainage of melted water, leakage onto the bed generally occurred."

"Furthermore, water tended to condense on the outer surface of the boot and to drip onto the bed. This wetting of the bed was annoying to the patient, required frequent change of bed clothes, and sometimes brought about a threat of maceration to the proximal portion of the

affected limb or to the contralateral extremity." (That is, a softening of the skin due to soaking in water which would affect the upper part of the leg or the other foot.)

"It was necessary to watch the patient carefully in order to prevent the leg from slipping down into the boot and in order to make certain the foot was continuously surrounded by ice. Additional ice had to be added as melting occurred. Altogether, proper management with this method of cooling required an exorbitant amount of nursing time."

The doctors asserted that for these reasons it was desirable to develop the portable foot freezer.

Zero Temperatures at Start

"This apparatus has been used with excellent results," they declared. "It has proved generally satisfactory to set the temperature initially at 0° F. for the first few hours until loss of sensation in the foot or hand has occurred."

"Then the adjustment is changed to a temperature of from 25 to 30° F., where it is usually maintained for a period of several days. The patients are comfortable, have considerable freedom of movement about in bed, and present no nursing problem at all."

The doctors further noted that if the temperature is kept too low, cooling extends up into the leg. A check on this indicated that while the portion of the leg just outside the refrigerator becomes quite cold, though not uncomfortable, the remainder of the leg remained at relatively normal temperatures.

The doctors said that they were "very favorably impressed with the value of local refrigeration before carrying out amputation in those cases in which infection of the foot or hand is present."

Stops Infection

"... Such local refrigeration seems to bring the infectious process to an immediate standstill and to prevent its spread. In patients with diabetes, the diabetes itself can thus be brought readily under control. When pain is present, it is relieved dramatically."

"Throughout a number of years, we have gained the impression that difficulties with the healing of the amputation stump have been minimized by the preliminary use of local refrigeration."

"This preoperative precautionary measure has seemed to us all the more important since from year to year more and more leg and fewer thigh amputations have been carried out for occlusive arterial disease."

"During the past few years we have employed local refrigeration before amputation in all patients in which there was even minimal infection."

The doctors pointed out that the electrically refrigerated foot freezer can be cleaned in any desired manner since the liner is non-corrosive.

Graybar of Grand Rapids Named Amana Distributor

AMANA, Iowa—Graybar Electric Co., Inc., Grand Rapids, Mich., has been appointed distributor for Amana home freezers and room air conditioners, it was announced recently by E. L. Hinchliff, sales manager of Amana Refrigeration, Inc.

Graybar will cover the western half of Michigan's lower peninsula.

Officers of Graybar at Grand Rapids are: Herman G. Cook, manager; Robert H. Hall, appliance sales manager; R. D. Keegstra, operating manager; and Jordan Bosma, assistant sales and advertising manager.

Commonwealth Distributes Kelvinator In Virginia Area

DETROIT—H. A. Valencourt, Kelvinator manager of wholesale distribution, recently announced the appointment of Commonwealth Sales, Inc., of Richmond, Va., as distributor of Kelvinator and Leonard appliances in central and southern Virginia.

Commonwealth Sales has serviced appliance dealers in this territory since 1936. E. T. Moore is general manager; R. M. Campbell is operating manager; and E. H. Hooks, sales manager.

'Biggest' Ad Campaign Launched by Amana To Promote Uprights

AMANA, Iowa—A two-page four-color advertisement in the Feb. 13 issue of *Saturday Evening Post* kicked off Amana Refrigeration's 1954 national advertising campaign, promoting the firm's new "Stor-Mor" upright freezers, it was announced by Merlin E. Morris, advertising manager.

The February-through-October campaign will be Amana's biggest, Morris said.

Headlined "See Amana First," the first ad of the campaign featured the freezer's Stor-More door, which can hold up to 116 food packages in patented space-saving racks that store and dispense the packages as in a candy machine.

The first ad in the *Post* will be followed by full-page insertions in that magazine, as well as *Life*, *McCall's*, *Fortune*, *Farm Journal*, *Successful Farmer*, *Progressive Farmer*, and *Sunset*.

Display cards and window and wall posters tying in with the ads, will be made available to help dealers benefit from the campaign, Morris said.

Ruthrauff & Ryan, Inc., of Chicago, is the agency.

Stueber, 555 Head, Dies; Shipp Elected President

LITTLE ROCK, Ark.—Roy E. Stueber, president of 555, Inc. and subsidiary companies, died suddenly of a heart attack in his home Jan. 23 at the age of 62.

At a meeting of the board of directors, Wm. F. Shipp, Jr., was elected to succeed Stueber. At the same time, S. G. Puryear was elected executive vice president and general manager; Phil H. Scheid, Jr., vice president; C. W. Blackwood, secretary-treasurer; and Frank Burke, director.

Stueber founded 555 in June, 1917, in a small one-room store, selling gasoline and Firestone tires. From this small start he built a large retail business, handling automobile supplies and accessories. A number of service stations and stores throughout Arkansas were later established.

In 1930 a wholesale appliance division was created, with Kelvinator as the major line. This division is now handled in a separate building in North Little Rock, distributing nationally advertised household appliances of all types.

The business will continue with the same policies and personnel, the company said. There are 225 employees, many of whom have been with the company for as long as 30 years.

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Atlas Plywood recommended shipping the air conditioner completely assembled in this single plywood case. Cutting down the shipping units from three to one saves many handlings by manufacturer and distributors, and reduces storage space requirements. The new Atlas Plywood case provides ample room for merchandising labels or trade-marking — and the plywood design virtually eliminates transit damage.

PUT YOUR OWN CASES TO THE TEST

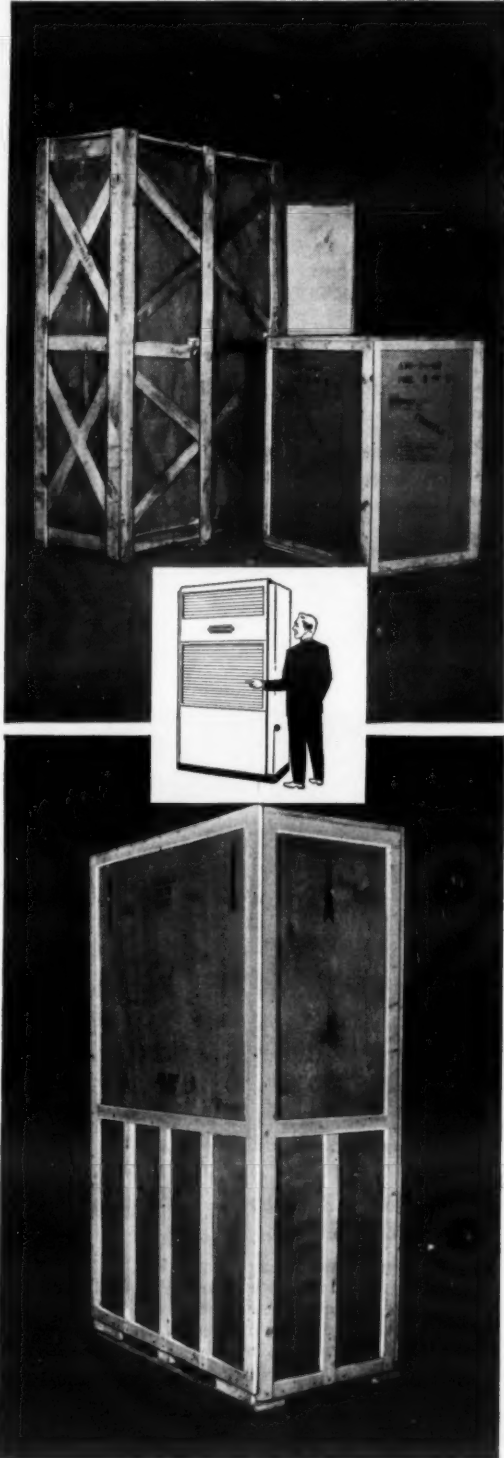
Ship samples of your products, in their present containers, to the Atlas Plywood Shipping Container Clinic. We'll give them tests reproducing all conditions of actual transit. You'll get a full report on how they stand up, along with any needed recommendations for improvements in your container design. And you're cordially invited to watch the tests.

This service by Atlas Plywood — the greatest name in plywood — is absolutely free and you are in no way obligated to follow our recommendations. Take advantage of it to cut your present shipping costs, including what you pay for containers, for shipping those containers — at the rate for the contents — and for damages.

Your Atlas Plywood representative (see Classified Telephone Directory) will be glad to make the arrangements. Or write to Atlas Plywood Corporation, 1432 Statler Building, Boston, Mass.

Atlas Plywood
CORPORATION

FROM FOREST TO FINISHED PRODUCT



*Air Conditioner made by Westinghouse Electric Corp., Hyde Park, Mass.



PLYWOOD CONTAINERS
FLUSH DOORS
HARDWOOD PANELS

IDEAL
Speed-Freeze
PRODUCTS

BEVERAGE COOLERS AND
INSTANTANEOUS DRAFT
BEER COOLERS.
(With Refrigerated Faucets)

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IDEAL COOLER CORPORATION
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WAGNER HIGH-
SPEED TESTED
COMMUTATORS
WILL LAST FOR
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Quality Control Plan

Manufacturer Shows How Records from Production Line To Field Failures Give Data To Eliminate Weaknesses

WASHINGTON, D. C. — How can manufacturers improve the quality of their product—particularly to reduce cost of field service?

In discussing the progress made along these lines by the Commercial Products Department of General Electric's Air Conditioning Division, R. G. Cordes offered a few suggestions at the Air Conditioner Conference held during the 49th annual meeting of the American Society of Refrigerating Engineers:

"First, take a close look at your quality program; compare it with programs used by other companies or with programs within your own organization.

"Secondly, streamline your program for efficiency; learn and add the new tricks of the trade.

"Thirdly, demand and get the all important 'action.' Any quality program will fail completely without it. Your program must earn the respect of the entire plant so corrective action is taken at once.

Enthusiasm Vital

"Finally, get enthusiastic! "Everybody likes to be on a winning team. Your quality program, if administered with enthusiasm, can make everyone feel that he is helping to win and keep the quality reputation your product has earned," Cordes emphasized.

"One of the more serious quality problems we had to tackle was the control of refrigerant leaks. Early in 1951 we used the halide torch for final leak test. This method involved a check of each tube and joint with a small flame; the presence of 'Freon' was noted by a change in flame color. This method is crude compared to present-day techniques. The torch was superseded by the General Electric type H (sniffer) leak detector which can be held, in our application, to a practical sensitivity such that it will find a leak that might lose 3 oz. of 'Freon' in 10 years. Both the torch and the sniffer methods rely on the skill and interest of the test man; as such, they are subject to occasional misuse.

Spectrometers Detect Refrigerant Leaks

"To make the science of leak testing even more positive, several General Electric Type M Helium leak detectors, (mass spectrometers) are now in use. When a refrigeration assembly is tested with the mass spectrometer, the assembly containing tubing, compressor, condenser, etc. is evacuated to approximately 50 microns and then surrounded by an atmosphere of helium; if there is a leak anywhere in the system, helium will enter. A sample of the very low pressure gas within the circuit is then taken into the helium sensing detector; if even a trace of helium is detected, the refrigeration assembly is rejected.

"One of the many advantages of the mass spectrometer is its ability to indicate small leaks which would be extremely difficult to find by any other means of detection. Once the unit is tagged as a leaker, it must then undergo a probing test to ascertain the defective joint, tube, or component. Pinpointing the leak is sometimes a very difficult job, but the leak is always found.

"The entire problem of leak testing is now a go-no go proposition instead of, 'cross your fingers for the five-year warranty period.'

"The ability to detect leaks is only part of the problem; once you know leaks exist, how do you avoid them?" points out Cordes.

"In our operation, control charts have been set up in all brazing areas. The charts are arranged so that each

brazer knows how many leaks he had today, yesterday, a week ago; and each brazing can see how he or she compares to other brazers.

"This information results in a very competitive spirit within the section, and although the charts were resented when first introduced, they now play an important part in keeping leaks at a minimum. In several instances, the use of the charts resulted in a 10 to 1 reduction in leaks—a very profitable venture!

Corrective Action Important If Plan Is To Succeed

"Every quality program would be a complete failure without corrective action! It seems that everyone who talks about quality, talks about methods of plotting quality control charts, and how to find limits; the most important step, corrective action, is frequently sidetracked. If action could be taken without the use of a single report, it would be just as effective.

"How then do we obtain action? First of all, a good reporting system will pinpoint the areas which are out of control. Once these are highlighted, the cooperation and enthusiasm of the foremen and his crew in following suggestions and instructions from the quality control group will insure correction. Cooperation and enthusiasm are among the attributes of a good foreman; like attributes displayed by members of the product quality team help to improve relationships and get things done fast.

Engineering Section Responsible For Products Quality

"In the Air Conditioning Division of the General Electric Co. the engineering sections are held responsible for the quality of all products. One of the methods used by engineering to determine quality level is to keep a running account of field failures. The hermetic refrigerant systems being made today are designed for factory reconditioning rather than field service; as such it is relatively easy to control the information regarding the cause for failures. A reconditioning report is made out for every returned unit; the report contains the following information:

"1. Serial number of conditioner, 2. Model, 3. Installation date, 4. Date of failure, 5. Dealer returned from, 6. Cause of failure as determined by test or inspection.

"This information is coded and punched on IBM cards. Every three months the cards are run through IBM machines; from the resulting tabulation, a report is issued showing the causes for failure, the percentages of production involved, and the action taken, proposed, or advised to reduce defectives. Once the percentage of field failures in a given time interval for any given cause is known, the failure rate is plotted against time and an estimate is made of the expected failure rate at the end of the five year warranty period.

Ratio Noted Between Field Failures and Factory Rejects

"A direct correlation has been found between the field failures and the factory test rejects indicated on the quality control charts," Cordes said. "The correlation has made it possible to determine a ratio of field failures to factory rejects. For instance, it has been found that for a certain joint, every 23 leaks found in factory test will result in one found in the field. Then, knowing the maximum field failures that are permissible to attain the desired failure rate, the ratio can be used to determine the maximum allowable leaks that should be found in test.

If the present rate exceeds this number, drastic action is imperative.

"The logical way to achieve a report of all minor field problems is to survey several typical locations. The Product Service Section of our department is set up to make such periodic surveys of the service calls made by several of our distributors. The survey is a summary and evaluation of the service tickets filed by the distributor. The number of conditioners in the area is known along with the length of service.

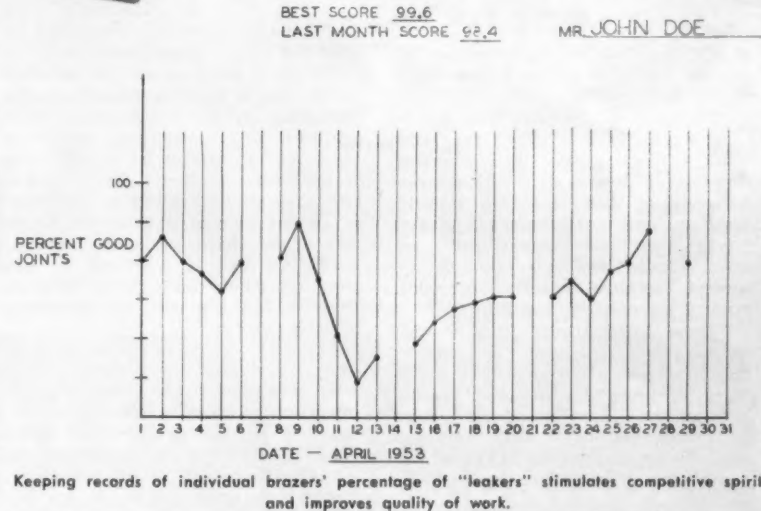
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"The quality improvement efforts of the Commercial Products Department of the General Electric Air Conditioning Division are rounded out by several other programs such as:

"1. Engineering Quality Audits.

"From 1 to 3% of finished production is assigned to the Engineering Laboratory for a test of operating characteristics as well as a visual inspection for appearance defects and



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"Accelerated life tests are often performed to check new designs. Worthwhile savings are frequently realized when weaknesses pointed out by life tests are corrected. Usually from one to 20 units are set up for test as soon as available.

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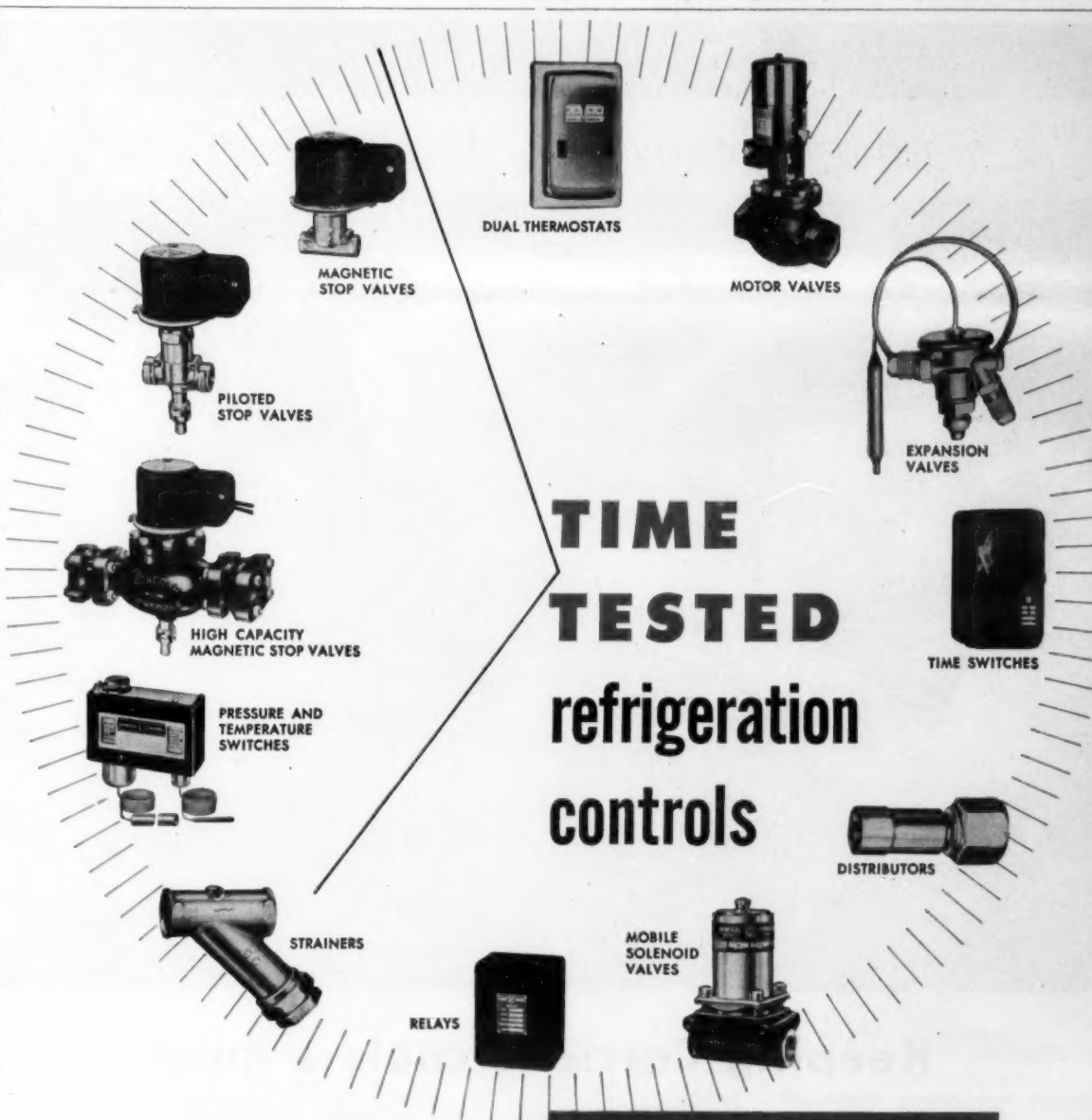
production pilot run is to get field experience on the model in question.

"4. Shake, Impact, and Shipping Tests.

"5. Return of Defective Parts From the Field.

"6. Quality Improvement Meetings.

"A bi-monthly meeting is held for each major assembly area to discuss quality problems and action."



For 23 years the name "General Controls" has been identified with the "best" in residential and industrial heating controls. During these years General Controls has also been serving the refrigeration industry with a quality line of automatic controls. Fully proved by years of service, General Controls provides a full complement of time-tested controls for heating, refrigeration and air-conditioning systems, both commercial and residential. For one source of supply and a single responsibility, get acquainted with General Controls through your nearest factory Branch Office.

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Portable 2-Part Freezer Aids In Amputations

**Closer Control Possible;
Comfort, Healing Increased**

INDIANAPOLIS—A small freezer into which a patient can put his foot or hand to freeze it prior to amputation has been developed by Robert C. Webber, president of the Webber Mfg. Co. here, and put to the test by Drs. Leo R. Radigan and Harris B. Shumacker, Jr. of the Indiana University Medical Center.

The mechanically refrigerated unit is reported by the doctors to contribute enormously to the comfort of the patient, to sharply reduce the care required from overworked nurses, and to cut from 12 to four hours the time required to freeze a limb. They have used it on 54 patients so far.

These are advantages gained over the former method of packing ice in a plastic and rubber boot around the infected limb.

The freezer consists of two parts. One is a refrigeration unit mounted in a small, portable soundproof cabinet which is placed beneath the patient's bed. An insulated tube leads to a small freezing unit which rests on the bed and into which the affected foot or hand is placed.

The freezing unit weighs less than 20 lbs. A thermometer is mounted upon it. Attached to the refrigerator is an automatic relay device for maintaining constant temperature and an easily adjusted control for selection of any desired temperature. A heavy felt pad closes about the ankle or



TWO-PART FREEZING UNIT. Lower cabinet contains refrigeration system. Top cabinet weighs less than 20 lbs.

wrist after the foot or hand has been placed into the freezer.

Webber, who specializes in the manufacture and sale of freezers and low temperature equipment, developed the foot freezer, as he calls it, about a year ago. The idea was suggested

to him by a Veteran's Administration maintenance man, who felt that there should be a better and more efficient way of refrigerating limbs than by packing them in ice.

Webber said that he was amazed when a check of the patent office revealed that no device for that purpose had been patented. Consulting with the two doctors, he found out what features they desired in a mechanically refrigerated unit and then went ahead and built one for them.

They have used the unit for many months and recently reported on their unit in a medical journal called "Surgery, Gynecology, and Obstetrics."

In their article, they pointed out that they had previously used the wet pack method of refrigeration and that they had discovered several definite disadvantages.

'Pack Method' Unsatisfactory

"The initial pain of cooling was often aggravated by the weight of the ice on the foot or hand," they wrote. "In spite of efforts to make the boot watertight and to provide for drainage of melted water, leakage onto the bed generally occurred."

"Furthermore, water tended to condense on the outer surface of the boot and to drip onto the bed. This wetting of the bed was annoying to the patient, required frequent change of bed clothes, and sometimes brought about a threat of maceration to the proximal portion of the

affected limb or to the contralateral extremity." (That is, a softening of the skin due to soaking in water which would affect the upper part of the leg or the other foot.)

"It was necessary to watch the patient carefully in order to prevent the leg from slipping down into the boot and in order to make certain the foot was continuously surrounded by ice. Additional ice had to be added as melting occurred. Altogether, proper management with this method of cooling required an exorbitant amount of nursing time."

The doctors asserted that for these reasons it was desirable to develop the portable foot freezer.

Zero Temperatures at Start

"This apparatus has been used with excellent results," they declared. "It has proved generally satisfactory to set the temperature initially at 0° F. for the first few hours until loss of sensation in the foot or hand has occurred."

"Then the adjustment is changed to a temperature of from 25 to 30° F., where it is usually maintained for a period of several days. The patients are comfortable, have considerable freedom of movement about in bed, and present no nursing problem at all."

The doctors further noted that if the temperature is kept too low, cooling extends up into the leg. A check on this indicated that while the portion of the leg just outside the refrigerator becomes quite cold, though not uncomfortable, the remainder of the leg remained at relatively normal temperatures.

The doctors said that they were "very favorably impressed with the value of local refrigeration before carrying out amputation in those cases in which infection of the foot or hand is present."

Stops Infection

"... Such local refrigeration seems to bring the infectious process to an immediate standstill and to prevent its spread. In patients with diabetes, the diabetes itself can thus be brought readily under control. When pain is present, it is relieved dramatically."

"Throughout a number of years, we have gained the impression that difficulties with the healing of the amputation stump have been minimized by the preliminary use of local refrigeration."

"This preoperative precautionary measure has seemed to us all the more important since from year to year more and more leg and fewer thigh amputations have been carried out for occlusive arterial disease."

"During the past few years we have employed local refrigeration before amputation in all patients in which there was even minimal infection."

The doctors pointed out that the electrically refrigerated foot freezer can be cleaned in any desired manner since the liner is non-corrosive.

Graybar of Grand Rapids Named Amana Distributor

AMANA, Iowa—Graybar Electric Co., Inc., Grand Rapids, Mich., has been appointed distributor for Amana home freezers and room air conditioners, it was announced recently by E. L. Hinchliff, sales manager of Amana Refrigeration, Inc.

Graybar will cover the western half of Michigan's lower peninsula.

Officers of Graybar at Grand Rapids are: Herman G. Cook, manager; Robert H. Hall, appliance sales manager; R. D. Keegstra, operating manager; and Jordan Bosma, assistant sales and advertising manager.

Commonwealth Distributes Kelvinator In Virginia Area

DETROIT—H. A. Valencourt, Kelvinator manager of wholesale distribution, recently announced the appointment of Commonwealth Sales, Inc., of Richmond, Va., as distributor of Kelvinator and Leonard appliances in central and southern Virginia.

Commonwealth Sales has serviced appliance dealers in this territory since 1936. E. T. Moore is general manager; R. M. Campbell is operating manager; and E. H. Hooks, sales manager.

'Biggest' Ad Campaign Launched by Amana To Promote Uprights

AMANA, Iowa—A two-page four-color advertisement in the Feb. 13 issue of *Saturday Evening Post* kicked off Amana Refrigeration's 1954 national advertising campaign, promoting the firm's new "Stor-Mor" upright freezers, it was announced by Merlin E. Morris, advertising manager.

The February-through-October campaign will be Amana's biggest, Morris said.

Headlined "See Amana First," the first ad of the campaign featured the freezer's Stor-More door, which can hold up to 116 food packages in patented space-saving racks that store and dispense the packages as in a candy machine.

The first ad in the *Post* will be followed by full-page insertions in that magazine, as well as *Life*, *McCall's*, *Fortune*, *Farm Journal*, *Successful Farmer*, *Progressive Farmer*, and *Sunset*.

Display cards and window and wall posters tying in with the ads, will be made available to help dealers benefit from the campaign, Morris said.

Ruthrauff & Ryan, Inc., of Chicago, is the agency.

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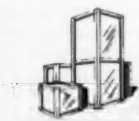
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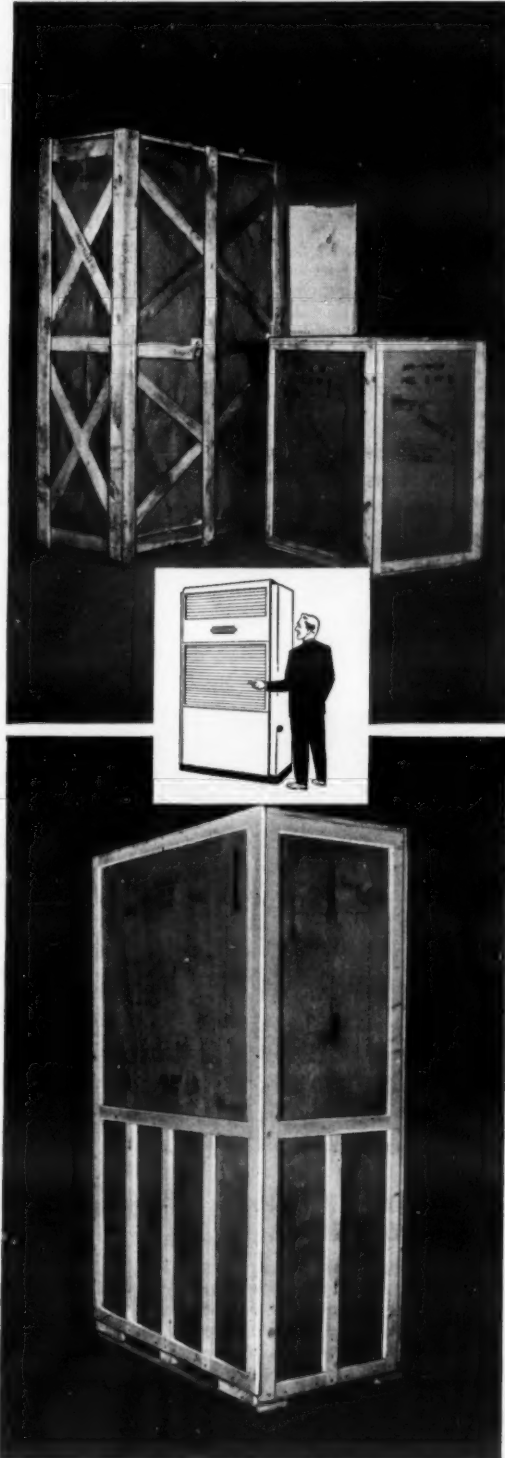
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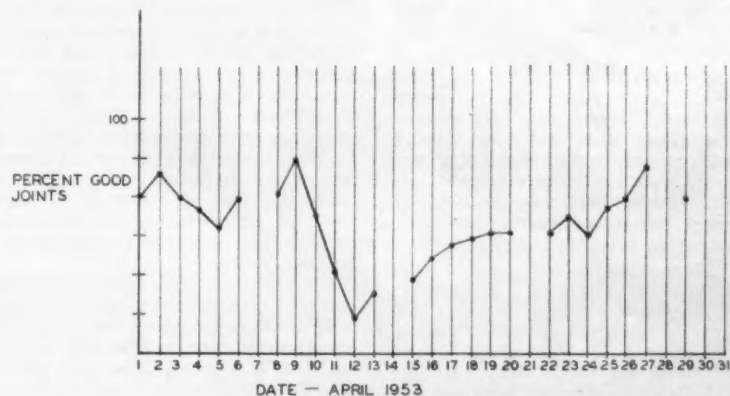
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"6. Quality Improvement Meetings.

"A bi-monthly meeting is held for each major assembly area to discuss quality problems and action."

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Control of Humidity with Unit Conditioners

Close Regulation Possible with Proper Damper Controls, Reheat Coils; Two Installations Compared by Kline of Frick

WASHINGTON, D. C.—"Unit conditioners can be used successfully for the close regulation of relative humidity when equipped with the proper controls on dampers or reheating coils," believes W. O. Kline of Frick Co.

Speaking at the Air Conditioner Conference held during the 49th annual meeting of the American Society of Refrigerating Engineers here, Kline discussed two installations of unit conditioners, the first having been made some 14 years ago with simple dry-bulb control; the second, installed recently, with close control of relative humidity.

"These installations were selected because they represent the time and the conditions existing then and now. They are located next door to one another and have much the same wall thickness, inside loads, and peak number of customers, at about the same time of day," he explained.

Latent Heat Load Significant

"The moisture-vapor or latent heat load in an air conditioning system has great significance. This moisture comes from infiltration, evaporation from materials or wetted surfaces, occupants in their variable exertions, ventilation, etc. This load will pyramid as the number of people increases, since they require larger proportions of outside air. More

humidity control is required due to this need for removal of more moisture and must be coordinated with the remainder of the equipment to give the proper plant characteristics.

"When a large proportion of fresh air is used in order to remove smoke, reheating of the cooled and dehumidified air is required, either by means of a by-pass or a coil using warm water or steam. Tempering of the fresh air with steam or hot water is almost always a practical necessity if the customer wants humidity correction and is unwilling to stop the unit when the outside temperature is too low for the necessary sensible cooling.

"Either of these reheat systems offers flexibility to changes in the load and keeps the compressor in operation in order to continue removing the necessary moisture," Kline said.

"When one of these reheating methods is used, the inside dry-bulb temperature will remain constant during the day, though it may increase slightly in the afternoon if compensated controls are applied. The relative humidity will gradually decrease from morning until late afternoon, after which it will again start to increase, due to shutdown of the units.

"After the unit conditioners are stopped at quitting time, it will be found that the inside dry-bulb tem-

perature will have increased overnight only about 2°, by say 7 the next morning. During the same overnight period, however, the inside dewpoint will have increased 6%."

"This increase in humidity overnight again is significant. It indicates the great force of the difference in vapor pressure between the outside and inside, which causes leakage through openings and cracks and through the porous materials of the building construction. This includes window and door framing, skylights, and even floors directly on the ground.

"The 'flywheel effect' of the building construction tends to retard changes in temperature, but the moisture-vapor pressure acts independently," Kline indicated.

Temperature Controls Alone Not Enough

"Results obtained from straight temperature control have been gradually evaluated over the years and have shown that there is not enough relative humidity correction secured at those times when it is most needed. This is particularly true when inside and outside temperatures are close together; then the major load comes from the inside.

"This is the case partly because condensed moisture is reevaporated from the coils and pans, after the



refrigerating machine stops. It is usual to have the wet-bulb temperature increase 6° or 7° while the dry-bulb temperature is increasing 3°.

"In the first installation under discussion here, these wide variations in humidity caused the owner and his customers to notice the difference between the 'off' and 'on' cycles of the unit," Kline said.

Machines Keep Operating When By-Passes Aren't Open

"To avoid these effects, the two unit conditioners in the second case were equipped with automatic by-passes and modulating damper motors. The refrigerating machines are kept in operation as long as the by-passes are not fully opened.

"With this equipment a relative humidity of 42 to 50% is maintained, and the need to go to a lower temperature is lessened. The over-all operating costs per unit are practically the same.

"As an alternate to the by-pass or the reheating coil method of humidity control, it was found that the use of multiple units also helped. Two units, each with half the capacity. This permits one of the smaller units to continue operating when the sensible loads are light, and to continue removing moisture.

"In another application, involving the upper floor of a hotel, it proved necessary to install reheating coils in one of two unit conditioners. Because the maximum temperature conditions occurred during only 10% of the time, the relative humidity in the space was generally too high. This was very noticeable during mild and humid weather, when only a little cooling was needed for temperature reduction but much more was necessary for humidity removal," he explained.

"Under mild conditions, the handling of less air at lower temperatures is required, in order to keep constant both the room temperature and the humidity. The unit conditioner in the first case, using dry-bulb control only, cooled the full volume of the air to a moderate degree; the better way is to cool a smaller volume to a lower temperature. When the volume of the air is the same, the amount of moisture removed is proportional to the cooling applied.

Winter Heating Coil Can Be Added

"The addition of an automatic by-pass at the side of the unit and around the cooling coil, controls the relative humidity in a very good fashion. It also allows the contractor to add a winter heating coil with winter controls, while permitting proper change-over for operating at other times of the year.

"High humidity proves particularly noticeable in a ballroom used earlier in the evening for a banquet, at which people have been smoking. Also, it is surprising to see the decrease in cooling load and the increase in relative humidity experienced when the number of occupants changes from a maximum to a minimum. This is true in many different types of installations, such as drugstores, banks, offices, or restaurants. All these humidity conditions require reheating with a by-pass or a special coil.

"The newer of the two unit conditioner installations in question is equipped with compensated controls. The inside temperature is increased 1° for each 2½° rise outside, starting from an inside setting of 72° F.

This arrangement takes advantage of the flywheel effect of the building, especially during the morning, when the sun causes a very sharp rise in the temperature out of doors," Kline said.

"More controls, often of the modulating type, are useful in meeting the increased demand for more comfort, and for the more exact requirements of industrial production.

"This all will have a more practical aspect as more and more unit air conditioners are applied to private homes, where special methods of control may prove necessary. Within the limits of a reasonable first cost, the extra returns in comfort and satisfaction will be great," he emphasized.

Keeps Tourists Happy

Spot Air Conditioning Cools Observation Point At Atlanta's Cyclorama

ATLANTA—One of Atlanta's most famous tourist attractions—the Cyclorama of the Battle of Atlanta—has kept its attraction during the hot summer months largely through air conditioning—and thereby hangs a story, according to Francis Daugherty, Jr., chief engineer for Carrier Atlanta Corp.

The Cyclorama is a huge circular canvas painting 50 ft. high and hung around the interior walls of a building at a radius of 45 ft. from the observation platform in the center.

From this platform, the tourist seems to be standing on a hill watching the famous Civil War battle for Atlanta going on around him, while a recording relates the story of the battle and points out the various events that the canvas portrays. In the intervals between narration, the recorded strains of "Dixie" are heard softly in the background.

For the comfort of the guests, the central platform is spot air conditioned with a Carrier unit, designed to maintain 80° F. temperature and 50% r.h. The equipment is located in a room below the platform, where the recording equipment is also located.

Air conditioning installation men being what they are, the men who installed the equipment became fascinated by the recordings. One got curious about the "Dixie" record. He took it off the turntable and looked at the other side. Then he replaced it—wrong side up.

The next lecture was given to the strains of "Yankee Doodle"—much to the consternation of the tour guide, relates Daugherty.

Money Talks

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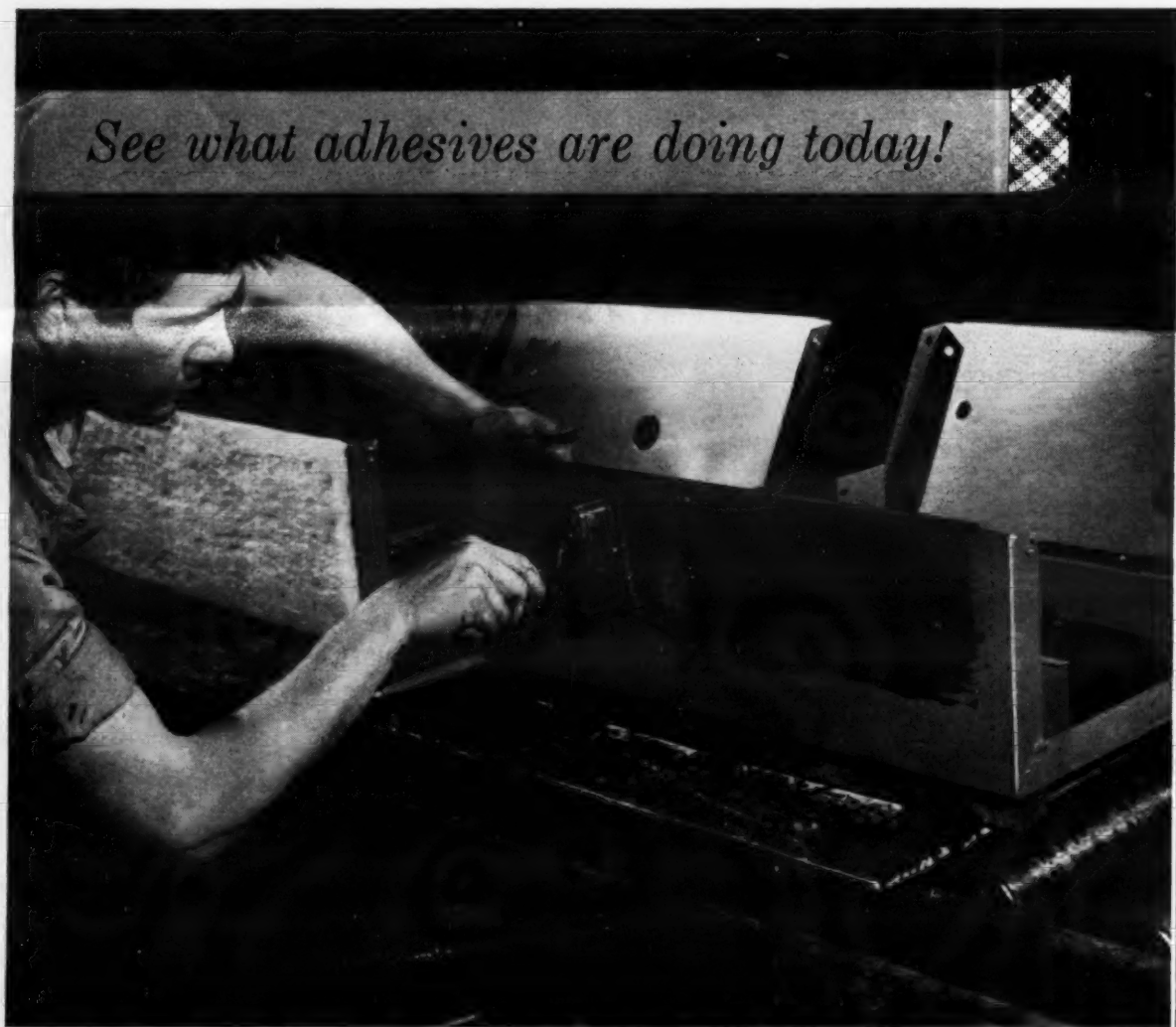
G.E.'s big Early Bird Sale is a good example. It helps you sell G-E Packaged Air Conditioners in the winter-time by making it possible for you to offer your customers big savings with no payments till May! (Of course, you get your money right away.)

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"Slants on Service" is a new "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business. These helpful hints and suggestions for improved service methods and shortcuts have been assembled in capsule form.

Warning on Carbon Tet Renewed by RSES

"The health hazards in the use of carbon tet as a cleaning agent have been brought to the attention of refrigeration men numerous times over the past several years. However, since many service shops make a practice of rebuilding or repairing various pieces of used equipment in the shop during the winter months, and for the benefit of new men who may have entered the refrigeration field recently, it is advisable to repeat the dangers in the use of this solvent," believes R. D. Hollingsworth, International Safety Director of RSES.

"Carbon tetrachloride poisoning can occur from inhaling the vapor. In concentrations of over 50 parts per million it can be very dangerous. It is picked up by the blood stream and distributed to the various internal organs. Since carbon tet is an excellent solvent for oils and greases it is only natural that it should attack the organs that contain the largest amount of fatty substance, namely the brain, liver, and kidneys.

"Carbon tet can also be absorbed by the fats and oils in the skin if rubber gloves are not used. It is then picked up and distributed by the blood stream with the same results as if the vapors had been inhaled."

"Eminent medical authorities have stated:

"1. That carbon tet poisoning can effect damage to the liver, kidneys, adrenal glands, heart, skin, lungs, and digestive and nervous systems.

"2. That the effects of exposure can be cumulative from one exposure to another until the point is reached where permanent damage to one or more of the above organs results.

"3. That persons who seem to be the most susceptible to carbon tet poisoning are alcoholics, fat people, undernourished persons, and those with peptic ulcers, liver, kidney, or heart diseases.

"Follow these rules when using

carbon tet," advises Hollingsworth:

"1. Use only in well ventilated area. A well designed forced-draft exhaust system should be installed over cleaning tanks. If you can smell carbon tet in the room, the concentration is too great.

"2. Never leave open containers in a room.

"3. Never expose your skin to liquid carbon tet. Use rubber gloves.

"4. Never allow carbon tet vapor to come in contact with an open flame. Phosgene, a very poisonous gas, is formed.

"5. If illness results from exposure be sure to advise physician so proper treatment can be prescribed.

"It is much preferable to use other solvents for your cleaning requirements. There are a number of acceptable solvents on the market. Ask your refrigeration parts wholesaler or supplier to recommend a substitute," he suggests.

Air Conditioning Spurs Sales of Revolving Doors

NEW YORK CITY—Air conditioning is a factor in the reviving interest in revolving doors, Arthur M. Simpson, chief engineer and manager of the revolving door division of International Steel Co., declared recently.

Large amounts of heat can leak into a building through loose doors and windows during the air conditioning season, thus increasing operating costs, he explained. Even heat would leak into the building during warm weather than would leak out during the heating season, he claimed. The milder the year, the greater the expense.

Simpson claimed that air conditioning expenses in a moderate size department store can be reduced by \$1,400 annually through the use of revolving doors. Revolving doors, he says, provide a tighter fit and less heat loss or gain than other types of entrances.

L. & L. Sales Distributes G-E Home Heating, Cooling

SPRINGFIELD, Ill.—L. & L. Sales, Inc. here has announced its appointment as wholesale distributor of General Electric home heating and air conditioning equipment as well as commercial air conditioning equipment for central Illinois and Missouri.

In a letter to customers, Andrew E. Yuskanich, general manager, also reported that the company will remain in the retail heating and air conditioning business.

"Under these circumstances," he said, "we find it impossible in fairness to our customers to remain in the retail appliance business."

Yuskanich said Goodyear Service Store, local G-E appliance dealer, has been appointed to maintain and service the G-E appliances customers have purchased from L. & L. Sales. Elmer Parker, the latter firm's appliance manager for several years, has taken a similar position with the Goodyear store.

Two Va. Firms Named 'Weathertron' Dealers

RICHMOND, Va.—General Electric Supply Co., eastern Virginia distributor of the G-E "Weathertron," has announced the appointment of Kilmarnock Service Shop in Kilmarnock, Va., and Budlong & Gregg, Inc., Warwick, Va., as new Weathertron dealers.

There are now eight dealers in the territory with operating demonstration Weathertrons on their display floors, according to A. M. Raney, Jr., commercial specialist of G-E Supply. He said installations "are now appearing all over the territory, and performance as well as operating cost is reported to be very satisfactory."

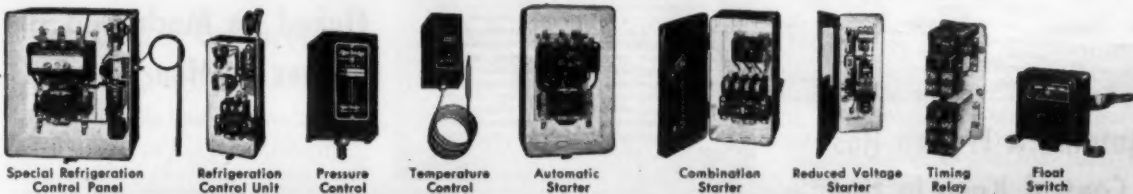
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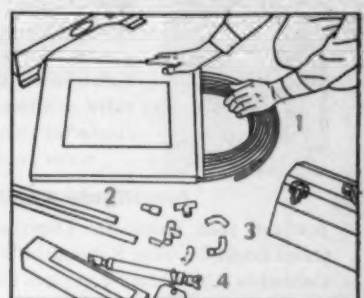
Why? Because the copper piping on this installation, as on all he makes, is going to be an all-Anaconda job. Uniform temper and exact fitting for fast connection speed up his work... help maintain his reputation for quality. He buys only

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Illustration shows Model DP-2 high capacity high lift pump for air conditioner applications. Also available is Model DP-1 packless centrifugal type pump, driven by "flex-power" motor... the ideal pump for use for dome, unit or flash coolers. Both models are ruggedly built for long, hard service; easily and quickly installed. Write for full information.

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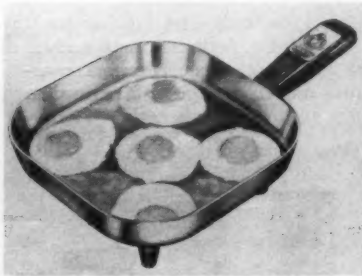
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What's New

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Automatic Frypan Has Control Knob In Handle

—KEY NO. D-230—

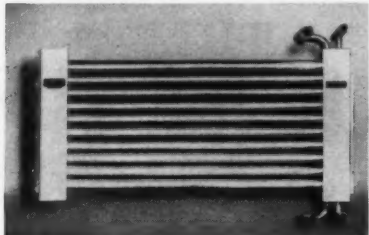
CHICAGO—An automatic, controlled heat, electric "Frypan" with a dial in the handle so that the pan can be set for any desired cooking temperature has been introduced by Sunbeam Corp. here.

A "Fry-Guide" printed on the handle gives recommended frying temperatures. A thermostatic control keeps the shortening always at the right temperature.

The Frypan's square design provides more cooking space in the same area when compared with round pans, the company claims. Because of its

water sealed element, the entire pan can be immersed in water up to the control knob for cleaning.

The Frypan carries a suggested list price of \$24.95.

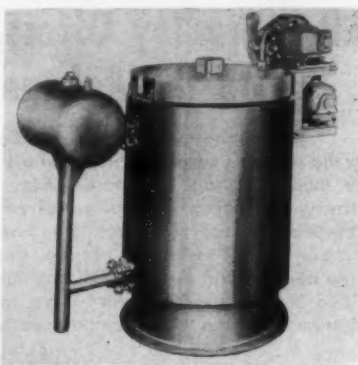


H&M Condenser Designed For Home Cooling Systems

—KEY NO. D-231—

PITTSBURGH—Halstead & Mitchell is now manufacturing a short-coupled, multisection condenser specifically for use in residential air conditioning systems.

As with all Halstead & Mitchell units, these are cleanable, double-tube counterflow units. Made for the original equipment market, they are available to manufacturers in 1, 1½, 2, 3, 5, and 7½-ton sizes.



Flaked Ice Machine Gives 24-Hour Service

—KEY NO. D-232—

CHICAGO—A new automatic flaked ice machine built to give uninterrupted 24-hour service and to produce flaked ice as low as \$1.50 to \$2 per ton has been introduced by the Burge Ice Machine Co. here.

The machine is made in three models—the B340 to produce three to four tons of ice daily, the B560 to produce five to six tons, and the B1012 to produce 10 to 12 tons.

Construction features include a flooded type refrigeration system and a single motor to operate both the harvester and the water pump.

The ice cutting knives on a shaft operate at less than 1½ revolutions per minute, depending on the quantity of ice required. Refrigeration joints are accessible.

Marsh Develops New Timer for Servicemen

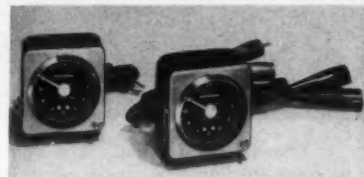
—KEY NO. D-233—

SKOKIE, ILL.—A new timer, designed to give the serviceman positive proof of total running time and total elapsed time of any unit under test, has been developed by Jas. P. Marsh Corp. here.

The timer is manufactured in two standard models—a 115-volt, 60-cycle model for use on domestic refrigeration and small commercial units using compressors of ¾ hp. or less, and a 230-volt, 60-cycle model for use on large commercial installations using 230-volt equipment.

Jet black dials with sharp white numerals are accurately graduated to 24 hours, with primary divisions every 15 minutes and numerals every 2 hours. A white hairline pointer indicates the total elapsed time, and a bright red pointer indicates the total running time.

The 115-volt, 60-cycle model is designed to operate in series with the equipment being tested. The user plugs in the unit being tested into the back of the timer, and the timer



into the nearest electric outlet.

The 230-volt, 60-cycle model operates in parallel with the compressor motor. One set of lead wires extending from the back of the timer case is connected to the motor terminals, and the other set is connected to the power lines leading into the units being tested. Insulated alligator clips make attachment safe and easy, the company said.

To avoid tampering with the timer during a test, a unique hasp arrangement is provided which permits locking or sealing the cover, according to the manufacturer.

The protecting case is of deep drawn aluminum, finished in durable hammerlock gray.

'Water Saver' Uses Rotary Jet-Type Distribution

—KEY NO. D-234—

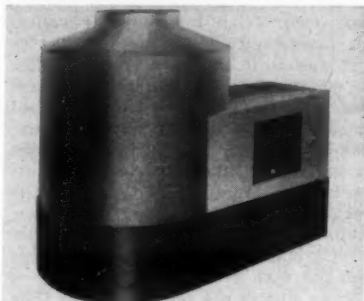
YORK, Pa.—Marketing of the Yorktowne "Water Saver," a new type of evaporative condenser for use with air conditioners, especially in homes, is being started by Yorktowne Machine Co., Inc. here.

The Water Saver uses a new rotary jet-type water distributing system which keeps the refrigerant condensing coil completely covered with water at all times, thereby cutting the power consumption as much as 20% as compared with a standard air-cooled unit, according to the company.

A counterflow design, using air in sufficient quantity to remove the heat from the water, is said to increase the efficiency of the Water Saver. The heat is carried outside through the wall or roof by a 10-in. round pipe.

A maximum of 2% of the water required for water-cooled operation is needed as makeup water, the company said.

The Yorktowne Water Saver is being made in two sizes—for 3 and 5-hp. air conditioners. The 5-hp.



unit is only 36 in. long, 22½ in. wide, and 25 in. high. This includes a refrigerant receiver, condenser, fan, jet water distributor, pump, and the necessary valves. Patents have been applied for on the unit.

The Water Saver is designed so that it can be incorporated as a part of a complete air conditioner.

E. I. Kraber, York manufacturer, is president of Yorktowne Machine Co. The Water Saver was designed by A. W. Ruff, veteran refrigeration specialist with V. C. Patterson & Associates, York, consulting engineers.

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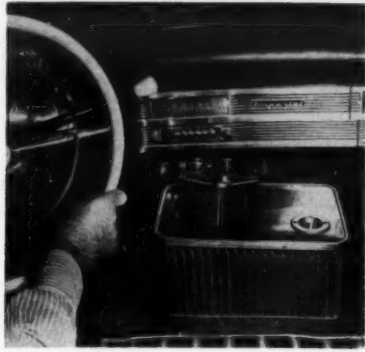
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What's New (Con't)

Evaporative Cooler Draws Power from Auto Fan Belt



KEY NO. D-235

PHOENIX, Ariz.—An evaporative cooler type automobile air conditioner that operates on a simple power take-off from the car's fan belt is being manufactured by the G & S Mfg. Co. here.

Called the "Idler" auto air conditioner, it is a blower type cooler with water pump powered off the fan belt of the car with adjustable pulley wheel and power cable drive to the cooler.

It mounts on the front floor over the "hump," the spot for most efficient cooling, according to the manufacturer. It has adjustable legs to fit any size car.

The Idler has ample water reserve for cooling up to 200 miles, depending on outside temperatures, so it can be filled along with the gas fill. The reservoir holds 3 gals. of water and is filled through a spout. A specially built Idler pump circulates the water from the bottom reservoir over the filter pads.

Air is pulled through the pads by the blower. The air outlet has adjustable levers so that the flow can be directed at any desired position.

The manufacturer says top efficiency can be obtained by regulating the fresh air flow from the regular fresh air front controls on the car and opening the two back window vents, or windows, 2 to 4 in. This will give a fast turn-over of cool air throughout the car. If idling, open one front window to remove excess humidity.

The manufacturer says that the unit can be installed in one hour and removed in three minutes.

One model is provided with a 115-volt electric motor and heating element. This model can also be used in the home as a spot heating unit, a humidifier, an evaporative cooler, or an air circulator.

The model operating on power take-off has a list price of \$79.50. The electric motor model is priced at \$89.50.

Farr Claims First High-Velocity 1-in. Air Filter

KEY NO. D-236

LOS ANGELES—What is claimed to be the first high-velocity 1-in. air filter has been introduced by the Farr Co. here.



Based on the "Far-Air" herringbone design, the new gabled-crimp 1-in. filter is "actually as efficient as most 2 in. types," the company declares.

It holds up to 800 grams of standardized fine air cleaner test

dust before cleaning is necessary, according to the manufacturer.

Test results show, the company states, that at 800 c.f.m., the dirt load

must reach 800 grams before there is any appreciable rise in pressure drop. At that point pressure drop curves above 0.2 in. w. g. Using the same filter at 1,200 c.f.m., pressure drop rises above 0.2 w. g. at about 600 grams accumulation of dirt load.

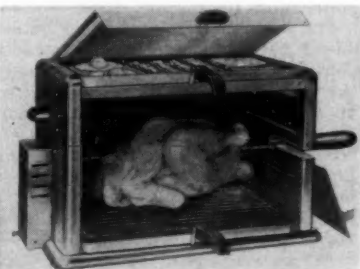
Among advantages cited by the manufacturer for the new filter are:

"Design engineers can now get higher quality performance in 1-in. frames. Equipment manufacturers can attain greater efficiency and economy in their products with 1/2 less space for filter units. Service organizations need make fewer calls to maintain safe, dependable air filtration for their customers."

Discussing the development program behind the new filter, S. F. Duncan, Farr's director of research, explains:

"Because of the proven acceptability and good performance of the herringbone-crimp screen type of media, retention of this in the 1-in. filter was highly desirable. Simply cutting a 2-in. filter in two not only ruined performance but introduced serious manufacturing problems."

"Stiffening the media, while maintaining ease of assembly for low cost production, was obtained by introducing the gabled-crimp design. In this design the change in passage direction inherent in the herringbone-crimp was retained and the effectiveness of the flat screen layers was increased by gabling the crimped and flat layers simultaneously."



Rotisserie-Broiler Holds 8-Lb. Roast, 6-Lb. Fowl

KEY NO. D-237

WINSTED, Conn.—An infrared open top rotisserie and broiler combination that will accommodate an 8-lb. roast or a 6-lb. chicken has been introduced by Capitol Products Co., Inc. here.

The combination will barbecue, broil, roast, grill, fry, and toast, the company says. Operating on 115 volts, a.c., the unit pulls 1,320 watts. Broiling and grill top surfaces are 9 by 14 in.

A powerful motor automatically rotates the spit for quick, even heat. The spit is easily removed to utilize three broiling positions, while a spatter shield gives added cleanliness.



New Styled Air Drier Has Larger Compressor

KEY NO. D-238

COLUMBUS, Ohio—New styling plus a larger compressor and other mechanical refinements are features of the new 1954 "Oasis" air drier, according to Ebco Mfg. Co. here.

The new design includes a slightly larger cabinet with new horizontal louvers and rounded corners. The cabinet is heavy gauge steel with tan baked wrinkle finish.

"To the new, bigger compressor, Oasis has added an oversize refrigeration condenser for greater operating efficiency," the company said. "Also adding to the improved performance in the 1954 models are new vertical copper tube coils which allow quicker, faster moisture condensation."

Oasis' 1954 design retains the three-way moisture disposal feature, as well as the Fiberglas moisture drawer. Collected moisture can be caught in the 10-qt. drawer, or the

drier can be placed directly over a drain, or a garden hose can be attached to a threaded fitting and run to the nearest drain.

Other refinements include more than 8 ft. of electric cord for plug-in convenience, polished metal glides for easy moving, and an off-on switch. The portable drier weighs 55 lbs.

Evaporative Condenser Has Blow-Through Fan

KEY NO. D-239

LOS ANGELES—Evaporative condensers of the blow-through type, successfully introduced in 1937 on the company-pioneered principle of locating fans in the moisture-free area of the supply air stream, are now available in an improved and expanded variety of arrangements known as Series PF (Perma-Fan), Type C, Drayer-Hanson, Inc., announced here recently.

Included are advances in housing construction, eliminators, headering, pumps, sump pan drainage, and finish.

Unit is now manufactured with 14-gauge galvanized steel housing, assembled by an exclusive water-tight construction process which completely eliminates leakage at joints, the company said.

Eliminators, which are hot dip galvanized after fabrication, may be serviced without disturbing duct connections.

Units are equipped with separate direct-connected motor driven pumps, mounted to unit with inter-connecting water piping. Pumps with bronze



impellers circulate ample water, assuring a fully flooded coil, according to the firm. Corrosion-resistant sump pan is included on legs to provide ventilation, with sufficient room to make drain connection.

Perma-Fan, as re-engineered with protective fan guard and in capacities ranging from 5 to 65 tons, now becomes a versatile unit for either outdoor or indoor installation, the company declares. For ease of handling, it also has the advantage of complete field disassembly.

Company boasts an original evaporative condenser unit—installed in 1937 in a California food market—has given continuous, trouble-free performance ever since.

JUST ASK US

For "easy-to-get" product information . . . Use Key No. for fastest service.

Here it is

The New 1954

Carrier Room Air Conditioner

built by the people who know air conditioning best

Put yourself in this picture...

selling the Carrier Room Air Conditioner with the new slim silhouette

The situation in this picture can mean money in your pocket. The prospect is a woman; the product, the room air conditioner that makes a special appeal to women.

The Carrier Room Air Conditioner with its new slim silhouette was designed to please all those women who objected to the appearance of previous air conditioners. The slender, graceful profile of the new Carrier scarcely extends beyond the window sill. Its simple styling and new lighter-hue colors make it completely unobtrusive.

The market represented by the woman in the picture—the home market—will probably account for 3 out of every 4 dollars you make. The woman is the key to that market. And the new Carrier is the key to her heart.

See this great new Carrier soon. Examine its new directional air flow . . . work its new simplified controls . . . see the built-in thermostat on the three larger models. You'll agree that from every angle the new Carrier fits into your profit picture.

CARRIER CORPORATION

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I like the picture. What's the name of my nearest Carrier distributor?

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Street _____

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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Problem In Auto Air Conditioning

QUESTION:

I have a problem on automobile air conditioning. The present design uses a constant pressure valve installed in the suction line, and an automatic expansion valve feeding from the liquid off the condenser and expanding into the suction line between the CP valve and the compressor. The CP valve is set at 30 p.s.i.g., and the automatic expansion valve is set for 15 p.s.i.g., and is used to reduce the capacity of the compressor.

In your opinion, would it be possible to eliminate the CP valve, and set the automatic expansion valve at about 28 or 30 p.s.i.g., and get the same operating results?

ANSWER:

Your question is quite interesting in that the existing system that you describe is somewhat unusual. Constant pressure valves are, of course, widely used in refrigeration work, especially on jobs requiring two evaporators to be carried at different

temperatures on the same machine. Constant pressure valves are also used quite widely in liquid cooling to prevent the evaporator temperature from ever going below the freezing point of the liquid—water, milk, or beer—in contact with the evaporator.

WHAT CP VALVE DOES

The purpose of the CP valve in the described system is to maintain a minimum temperature of the evaporator—about 32° corresponding to 30 p.s.i.g., thus preventing frost accumulation on the evaporator—regardless of the variation in load and/or the capacity of the compressor.

However, the CP valve does not prevent the evaporator temperature from rising above 32° if the load increases more than the capacity of the compressor at 30 p.s.i.g.

In both of these respects, the CP valve seems to be duplicating the effect of the automatic expansion valve in the by-pass between the condenser and the suction line, so you very naturally and quite properly wondered why it would not be possible to eliminate the CP valve and depend entirely upon the AEV to maintain a constant suction pressure, and consequently a constant evapo-

rator temperature, regardless of variations in load or compressor capacity.

BY-PASS AEV USED ALONE

Several automobile air conditioning systems depend on a by-pass valve alone to maintain a constant evaporator temperature regardless of variation in load or in compressor capacity due to variations in engine r.p.m. In one well-known system of this type, the by-pass valve is a special type of electric solenoid valve that is opened and closed by a thermostat actuated by the temperature of the air inside the automobile body.

It appears that the system that you describe depends mainly upon the CP valve to maintain constant evaporator temperature regardless of variations in load and compressor capacity. However, during times when the heat load on the automobile body is light and the capacity of the compressor is high (such as during fast driving on a cool day), the suction pressure to the compressor might be quite low—possibly into a vacuum.

In such cases, the automatic expansion valve comes into play when the suction pressure to the compres-

sor gets down to 15 p.s.i.g. The pressure in the evaporator stays at 30 p.s.i.g. and the evaporator temperature stays at 32°, but the suction pressure is held up to a minimum of 15 p.s.i.g. by the AEV in the by-pass.

CP VALVE SHOULD REDUCE SUPERHEAT TO COMPRESSOR

One advantage of the use of the CP valve is that it reduces the amount of by-passed refrigerant required and thereby probably reduces the superheat to the compressor. Using the by-pass valve alone, a great deal of refrigerant must be by-passed from the condenser to the compressor suction under conditions of light load, particularly at high road speeds and consequently high compressor capacity.

Under such conditions, care must be taken that the great amount of superheat in the by-passed gas does not cause overheating of the compressor and damage to it, particularly to its valves.

There seems to be no reason why the AEV alone, reset to 30 p.s.i.g., would not do the same thing. Thus the CP valve does not seem to be necessary.

Provided, that the AEV is large enough to by-pass enough refrigerant to the suction line to keep the suction pressure up to 30 p.s.i.g., even when the compressor capacity and the load on the evaporator are badly out of balance; that is, when—as during fast driving on a cool day—the compressor capacity is greatly in excess of the load on the evaporator.

If the AEV is a small one, say of ½-ton capacity, it is doubtful if it would be large enough to maintain a balance between the compressor capacity and the evaporator load and maintain an evaporator temperature of 30° or more.

Moreover, you may find that with the CP valve removed, the AEV may have to pass so much liquid to the suction line that you may overtax the ability of the suction line to evaporate the liquid "Freon-12" by-passed by the AEV, so you might cause the compressor to be fed quite a little liquid, thus causing dilution of oil in the compressor, and liquid slugging, either of which would result in noisy compressor operation, excessive vibration, and in time, damage to the compressor.

So, why not remove the CP valve, reset the AEV to 30 p.s.i.g., and see what happens? There should not be very much difference in operation, but if there is, and operation is not as satisfactory, you can always re-install the CP valve, and reset the AEV back to 15 p.s.i.g. We would be interested to know what changes are noted, if any.

In the above we have assumed that liquid control is by means of a thermostatic expansion valve.

Cottage To Aid In Gathering Data on Year-Round Systems

WICHITA, Kan.—A new smartly-styled modern cottage here which would fit neatly into a neighborhood of homes in the \$12,000 to \$18,000 price bracket, will be used to get data on year-round air conditioning.

Officially designated the F.I.R. Research Residence, the new six-room structure is part of the fast-growing test facilities at the Wichita University Foundation for Industrial Research.

Even before the interior is finished, Research Residence will be pressed into service in the interest of the Coleman Co., Inc., manufacturer of equipment for residential heating and air conditioning. The initial project will be to measure scientifically the effectiveness of heating equipment for houses built over a concrete slab.

In the first experiments, air ducts only 3½ in. in diameter have been imbedded in the slab floor of the Research Residence. The ducts connect a centrally-located forced air furnace with new type registers installed in the floor and near the outside walls of each room.

To find out what happens to the warm air from the time it leaves the furnace until it flows into the living space, F.I.R. engineers have imbedded wire thermocouples to a depth of 4 ft. below the surface of the slab. The thermocouples lead to automatic recording instruments which periodically jot down the temperature at the end of the wire.

More thermocouples are buried at depths of 3 ft., 2 ft., and 1 ft. In all, there are 375 temperature check points beneath the floor, 50 at floor level and 150 within the house.

In addition, 10 pitot tubes for measuring the speed of the warm air as it moves through ducts are connected to recording instruments.

An unusual feature of the house is a special test section in the "living room." Here a 4-in. duct of clay sewer tile has been buried beneath 4 in. of concrete. Beside it and also buried to a depth of 4 in. is a standard 3½-in. metal duct. Next in line is a 3½-in. duct buried to a depth of only 2 in. Fourth and last is a 3½-in. duct covered with glass fiber insulation and buried under 4 in. of concrete.

Which duct is best for heating slab floor houses?

That's just one of the things Coleman Co. engineers want to find out, says Dr. Luther Lyons, director to the Foundation for Industrial Research.

The tests, Dr. Lyons believes, will help solve a problem of long standing: How to efficiently heat the slab floor house. And while considerable research has already been done on the problem, tests at the F.I.R. Research Residence are expected to produce new and helpful data.

Experiments with the Coleman small pipe perimeter heating system will occupy several weeks. Upon completion the setup can be used to measure the efficiency of year-round air conditioning equipment.

In order to fit a variety of heating and cooling systems to the house, interior walls are easily removed or changed about. Space has also been provided in the attic for installation of a horizontal type furnace and cooling unit.

Research Residence was designed by M. H. Beckman, associate professor of the Wichita University School of Engineering.

Halogen Leak Detector Redesigned by G-E

SCHENECTADY, N. Y.—General Electric's halogen-sensitive leak detector has been redesigned to permit easier detection of leaks in closed systems, according to the company's Meter and Instrument Dept.

The portable G-E instrument, introduced five years ago, can reportedly detect a leak so small that only ¼ oz. of gas will pass through the opening in a year. It is used in testing for leaks in refrigerator and air conditioning systems, tanks, boilers, piping, and other products that must be leak proof and into which a halogen gas can be introduced as a tracer.

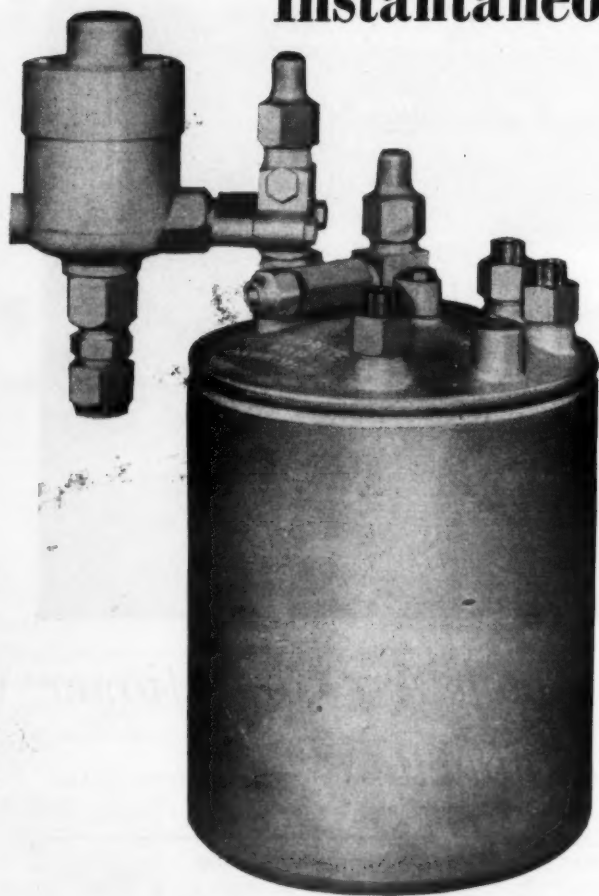
In the redesigned equipment Type H-1, a loudspeaker has been built into the control unit for audible indication of leaks. The new device also features an automatic balancing circuit to compensate for changes in background air contamination. Incorporated in the control unit is a new light-weight, internal voltage stabilizer. The former model required an external voltage stabilizer.

The Type H-1 detector retains features of the former model, such as the earphone plug and the instrument indication of leaks. Now, however, leak indication can be simultaneously indicated by means of the dial, earphone attachment, or through the built-in loudspeaker.

The detector equipment consists of a pistol-like "sniffer" and a 17-lb. control box about the size of a portable typewriter. It is well suited for assembly-line use as well as for service testing in the factory and in the field.

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You can TALK TEMPRITE Instantaneous Liquid Coolers



The extremely high capacity of all Temprite coolers is based upon an exclusive instantaneous cooling principle! The cooling coils are directly submerged in the liquid refrigerant!

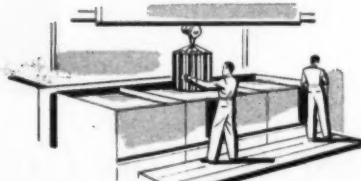
Temprite coolers (in 18 models) are easy to install because every model is equipped with an infinite pressure control valve, a liquid control float valve, and liquid and suction line shut-off valves. No additional controls are needed.



DRIVE-IN RESTAURANTS, cafeterias, roadside stands, taverns, bars, etc.—cool water, carbonated water or beer with Temprite Liquid Coolers.



DRIVE-IN THEATRES, amusement areas, race tracks, ball parks, transportation terminals, etc., cool all types of beverages with Temprite.



QUENCHING BATHS and other industrial processes requiring cool water, alcohol, light oils or chemicals, use a Temprite Cooler.



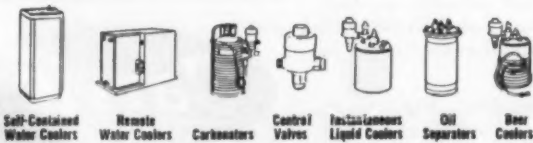
SPOT WELDING, machine and die cooling and many other applications increase efficiency through the use of Temprite Instantaneous Liquid Coolers.

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E-Z-SEE

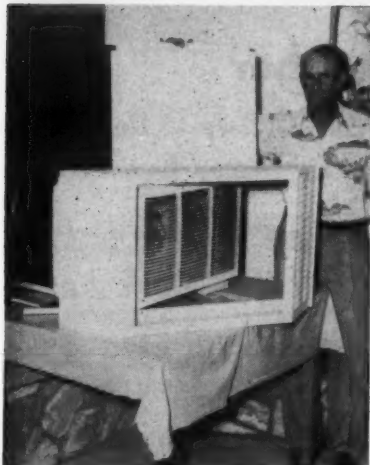
LIQUID INDICATOR

NEW FLO INDICATOR FLAP SHOWS ALL FLOW CHANGES

Analyze flow, function of expansion valve, by means of E-Z-SEE sensitive flap, instantly responsive to variations in flow. Positively leak-proof — hundreds of thousands in use.

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DAVID MAHONEY OF MIAMI shows how his all-weather protector shield fits around the outdoor portion of a window air conditioner. It is not in position yet.



WITH THE SHIELD in position, Mahoney inserts the solid door that covers the front of the frame when the air conditioner is not in use. The door protects the unit from hurricanes, vandals, and other dangers.

Shield Protects Exposed Portion of Window Air Conditioner That's Been Mounted In Wall

MIAMI, Fla.—An all-weather protector shield designed to cover the portion of an air conditioner projecting beyond the building when installed through the wall has been developed by David Mahoney, owner of Mahoney Air Conditioning Service here.

The shield is welded from 24-gauge galvanized iron and is made in two sections—the frame and the door.

The frame is fastened to the wall with lugs and is caulked to a waterproof fit. This remains in place at all times and, when painted to blend with the wall, is hardly noticeable, according to Mahoney.

Frames are made in two sizes, one 6 by 34 by 18 in. and the other 8 by 39 by 18 in. Side sections contain 40 louvers about 3 in. wide for ventilation.

The removable door, covering the front of the frame, is fitted into place only when the air conditioner is not being used. It slips in and out easily and provides protection from hurricanes, from vandals, and from other dangers. It also affords protection to the opening when the air conditioner is removed for service. The shield will not interfere with removal of the unit, Mahoney says.

Another advantage of the shield is the prevention of wall stains caused by dripping condensation. Holes at the outer edge of the bottom of the shield allow drainage several inches from the wall.

Mahoney sells the shield for \$27.50 retail, including installation. He designed it and has applied for patent rights.

To Clinch Difficult Sales

Dealer Shows Prospect Sample of How He's Made Complicated Room Cooler Installation

SHREWSBURY, La.—When a homeowner tells James Currie, appliance manager at Ponchartrain Lumber Co. here, that he is afraid construction problems rule against installing a window-type air conditioner, Currie has the answer in a long list of "difficult installations."

"A number of good prospects feel they can't install a room cooler because of steel casement windows, extremely narrow windows, or similar problems," Currie pointed out, "though they are interested and can afford to go ahead with the installation once they know it can be done."

"We keep complete records on every installation. Among these we are bound to find one which closely resembles the condition worrying the homeowner. We call the former customer, tell him that we have a prospect who has the same installation problem, and ask him to let us demonstrate his room cooler to the new prospect."

For example, one customer of the firm has three ¾-ton units installed in three separate rooms, all through casement windows. Taking a prospect who is dubious over steel-window

installation to this home has never failed to make a sale. Currie demonstrates how the lower two or three panes from the window have been removed, steel framework cut out, and the cooler inserted.

One window consists of two crank-operated panes which open out, and even this one has been converted for air conditioner use by setting up a "Dutch door" arrangement, cutting the panes short, re-framing the bottom of the glass, and inserting the cooler below.

Where older homes are concerned, and extremely narrow windows the problem, Currie's solution is to show the prospect through-the-wall installations eliminating the window problem altogether. These installations are particularly easy to demonstrate by driving past homes with cut-through installations, where the exterior of the cooler can be seen jutting out.

There are some thirty unusual installations on the Louisiana dealer's list at present, any of which can be used as "demonstration homes."

Magic Chef Adds Sales Divs. In Cincinnati, Pittsburgh

ST. LOUIS—Magic Chef, Inc. has created two new sales divisions to provide better service for dealers and distributors in the Pittsburgh and Cincinnati areas. E. W. Link and E. L. Massing have been named managers.

The move, according to Vice President Marc Pender, is another in a chain of expanding sales alignments, especially geared to absorb new products into the company's program. Magic Chef's home appliance line now consists of gas and electric ranges, gas and oil home heaters, room air conditioners, and

gas incinerators. All except gas ranges have been added since 1950.

Link, a veteran of 14 years with the firm, will direct all Magic Chef sales activities in the Pittsburgh, Altoona, Butler, Indiana, Johnstown, Kittanning, New Castle, Sharon, Meadville, Oil City, Ridgeway-St. Marys, Clearfield, Punxsutawney, Beaver Falls, Steubenville, Uniontown, Washington, Greensburg, Wheeling, Cumberland, Morgantown, and Cambridge trading areas. He will be assisted by R. E. Joecken, C. W. Baumann, and R. E. Whiteford. Pittsburgh headquarters will be at 1320 Penn. Ave., Pittsburgh.

Massing, with the company since 1936, will manage sales for Cincinnati, Hamilton, Maysville, Rich-

mond, Chillicothe, Dayton, Portsmouth, and Washington Court House. Assistant will be A. J. Sonnenberg with headquarters at 14 Greenwood Ave., Fort Thomas, Ky.

Carrier Names Wilson to Sales Post In Southeast

ATLANTA—Eugene H. Wilson of Decatur, Ga., has been appointed district merchandising manager for room units and ice makers by G. C. Robertson, district manager of Carrier Corp. Unitary Equipment Div.

He will make his headquarters at the Atlanta office of Carrier and will work with distributors in Georgia, Florida, Alabama, and Tennessee.

Attention: Air Conditioning Dealers

This coupon will bring you news of the most revolutionary room air conditioner in the industry. Mail in today for the exciting profit story.

MAJESTIC MAJOR APPLIANCE CORPORATION
BOX 983, LIMA, OHIO
SUBSIDIARY OF THE WILCOX-GAY CORPORATION

Gentlemen:

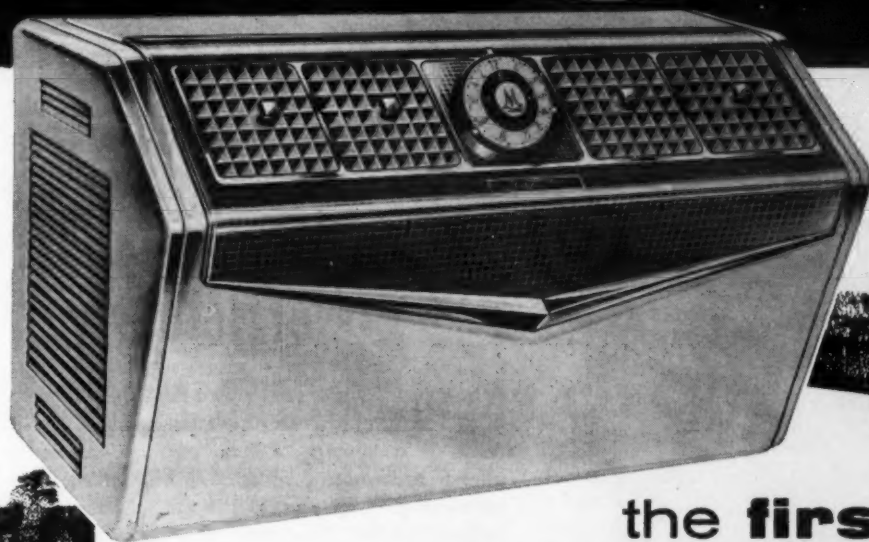
I am interested in learning more about your direct-to-dealer plan.
Rush all information on the 1954 Majestic air conditioning line.

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CUT OUT COUPON AND MAIL TODAY!

Majestic

AUTOMATIC



the first
fully automatic
room air conditioner

Featuring

TIMESET... THE CLOCK CONTROL THAT STOPS AND STARTS THE UNIT... AUTOMATICALLY

plus

THERMOSET

Automatic Thermostatic Temperature Control

plus

THERMOHEAT

Automatic Built-in Heating Unit

Yes, all this and still priced LOWER than ordinary room air conditioners... and, with a FULL profit margin.

DEALERS: Majestic offers the easiest selling air conditioner ever! A unit that can actually save up to 50% on operating costs. A unit that will create more enthusiasm than any other ever made. A unit that opens up an entire new MASS MARKET THAT YOU CAN SELL! A unit that PAYS FOR ITSELF in a few short years. Here is the strongest, most exciting sales story ever!

Here is a room air conditioner that sells itself!

Attach the coupon to your letterhead and mail today.

MAJESTIC MAJOR APPLIANCE CORPORATION • BOX 983, LIMA, OHIO Subsidiary of the Wilcox-Gay Corporation

AUTOMATIC MODELS	Suggested Retail	
	Model	Price
	MAC 504	½ ton \$299.95
	MAC 754	¾ ton 369.95
	MAC 1004	1 ton 429.95
	MAC 604C*	½ ton 299.95
* Casement window type.		
STANDARD MODEL	(Without Timeset, Thermoheat, Thermoheat)	
	ACS 754 ¾ ton	\$289.95



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This information helps us to make the NEWS serve you better.
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Penn Controls Adds 6 Sales Engineers to Field Force

GOSHEN, Ind.—Penn Controls, Inc. here has announced several organizational additions and changes in a move expected to strengthen its sales territories throughout the United States.

Six new sales engineers have been added to the force in the field which the company said would enable Penn to maintain closer contact with its wholesaler and dealer organizations, and provide even better coverage of the rapidly-expanding markets for all types of automatic controls.

3 FIELD MEN NAMED

The men are Ivan Stepnich, Peoria, Ill.; Joseph B. Chomel, Connersville, Ind.; Richard C. Young, Keokuk, Iowa; Albert J. Walter, Dunkirk, N. Y.; John W. Clark, Minneapolis; and David F. Belknap, Lincoln, Neb.

Stepnich has been named sales engineer for a new office in Columbus, Ohio, which will supplement the district offices in Cleveland and Dayton to better serve central Ohio. The Columbus office is located at 1360 W. Sixth Ave.

Chomel has been appointed sales engineer for Penn's Atlanta district office, located at 45 Third St., N.E. He will work with Harold King, district manager for the Atlanta district which encompasses the entire southeastern United States.

Young was appointed sales engineer to work with Jud Forbes, Goshen district manager. The Goshen territory has been expanded to include much of Indiana and all of lower Michigan, including Detroit.

The Detroit district office has been closed and is now consolidated with



R. C. YOUNG



D. F. BELKNAP



IVAN STEPNIICH



J. B. CHOMEL



A. J. WALTER



J. W. CLARK

the Goshen district. Orr Sander, formerly district manager in Detroit, will become Penn's warehousing representative in that city.

Walter was named sales engineer for the Chicago district office at 520 N. Michigan Ave. He will work with H. C. Shilling, district manager.

Clark becomes sales engineer for the Los Angeles district office located at 228 Glendale Blvd. He will work with Eugene M. Ford, district manager there, in a district covering southern California, Arizona, and lower Nevada.

Belknap has been appointed as sales engineer at the Goshen factory.

All of the new sales engineers recently completed an extensive training program at the Penn factory.

OTHER CHANGES

In another personnel change, Kenneth M. Fisher of Austin, Texas, formerly assistant national service manager for Penn, has been named district manager for the Dallas district. He succeeds James M. Stiver.

It was also announced that Penn's district office in Pittsburgh has moved to new quarters and is now located at 2961 W. Liberty Ave.

Amana Names New Distributor

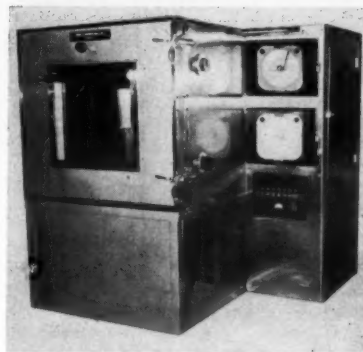
AMANA, Iowa—Folker Distributing Corp., Milwaukee, has been appointed distributor for Amana home freezers and room air conditioners.

Folker will cover the southeastern Wisconsin territory. Officers of Folker are: Henry H. Folker, president, who will direct sales activities, and Herman Klose, secretary.



Test Chamber

Proportional Input Control Allows Only 1/2 Degree Variation In Cabinet Designed by Tenney Engineering



TEST CHAMBER with proportional input control.

CULVER CITY, Calif.—The temperatures of most automatically-controlled environmental test chambers are regulated by "simple" on-off controls. For example, in high-temperature testing, when the chamber temperature exceeds a certain set value, the heaters automatically turn off. When the temperature drops below this value, they cut on again.

Recently, however, Howard Hughes, for his Culver City, Calif. plant, needed a 27-cu. ft. temperature-humidity chamber which could be controlled within closer tolerances than could be provided by on-off control. He wanted 1% accuracy over a temperature range from 32 to 212° F.

Faced with this problem, Tenney Engineering, Inc. recommended "proportional-input" control.

COST WAS \$1,500 EXTRA

Given the go-ahead, although the cost of this close control was estimated to be approximately \$1,500 extra, Tenney, in cooperation with the Bristol Co., developed a temperature control system which regulates chamber temperature within 1/2° F.

This close control is not available with on-off control because of the "lag" or "drag" which results when the heaters are turned on or off. The effect of their being on or off carries over past the set temperature and makes the chamber too hot or too cold.

Thus, there is an almost continuous cycling about the set point—the chamber is never on "straight-line" control but always a little over or a little under—not much, to be sure, but too much to meet Hughes' particular specifications.

CYCLE OF FOUR SECONDS USED

With proportional control, instead of turning the heaters off as the temperature rises above a certain set point and on as it falls below, the heaters continuously turn on and off every four seconds within a control band which extends on both sides of the set point. The portion of the four seconds the heaters are on depends upon how close the chamber temperature is to the set value.

For a set value of 200° F., a 2% control band—the "width" used in this case—is four degrees wide, 198 to 202° F. When the chamber reaches 198° F. the heaters automatically turn off for a fraction of a four-second period.

As the temperature approaches 200° F., the proportion of time the heaters are off increases until they are off 50% of the time at 200° F.

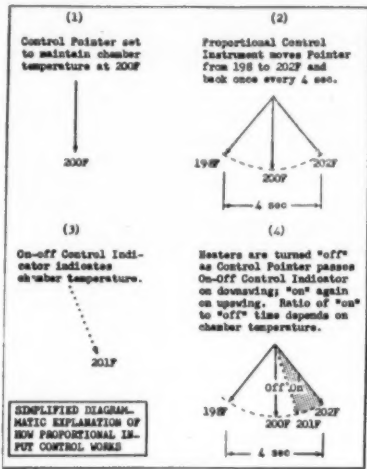


DIAGRAM shows how proportional input control works.

Should the temperature exceed 200° F., the heaters are off longer than they are on. Should 202° F. be reached, they cut out entirely.

Actually the temperature deviates only slightly from 200° F. and virtual straight line control is obtained.

The proportional control unit operates in conjunction with on-off controls. By means of synchronous motor and gear train, the proportional control unit actually moves the on-off control pointer back and forth across the control band once every four seconds.

As the control pointer passes the indicator which registers actual chamber temperature, the heaters automatically turn on or off, depending upon the direction in which the control pointer is moving.

The greater the excess temperature, the greater the proportion of "off" to "on" time. The greater the temperature deficiency, the greater the proportion of "on" to "off" time.

New Method of Cold Galvanizing Developed

NEW YORK CITY — After three years of extensive testing, a new method of cold galvanizing for surface protection of steel and iron has been announced by Galvicon Corp. here.

"This new process, which utilizes Cold Galvanizing Compound, is not a paint, but actually a cold galvanizing compound," the company said. "Despite its considerably lower cost, 'Galvicon' equals and in many cases outperforms other surface protection techniques including electroplating, hot-dipping, cementation, spraying, and painting."

Galvicon, the new coating manufactured solely in the United States, is now available for general distribution. It has found a wide variety of uses, not only in the process of manufacturing, etc. but also in plants and factories "in every field from food processing to textile manufacturing, wherever rust occurs on machines, equipment, or outside installations," according to the company.

"This compound may be applied with an ordinary paint brush, elec-

tric spray gun, or by cold dip. Special equipment or personnel training is not necessary."

Iron or steel surfaces coated with Galvicon create an electro-chemical union, thereby uniting the zinc with the base metal's surface.

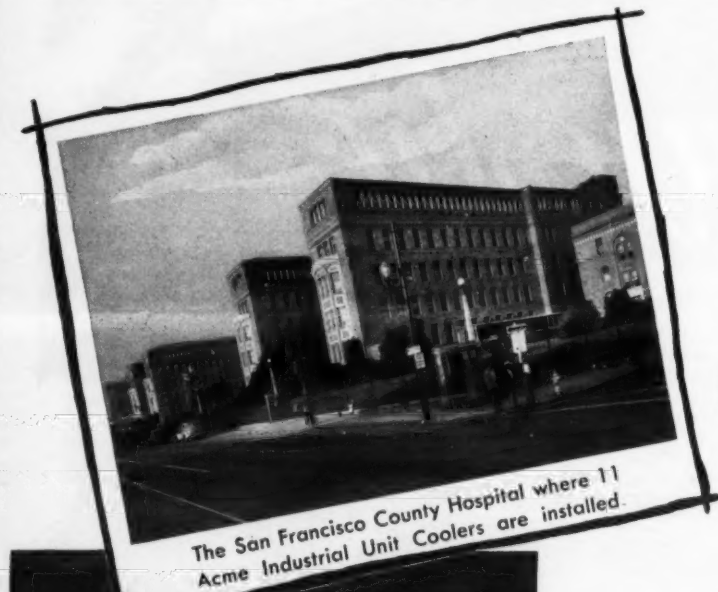
Galvicon is said to leave a coating in excess of 96 parts by weight of chemically pure zinc. The size of the zinc particles are just a fraction in size of the finest zinc dust that is produced in this country, the company pointed out.

"In instances where Galvicon is directly applied onto adhering rust, it induces the rusted area to create its own non-flaking coating, thereby stopping any further rust and preventing 'rust creep,'" it was stated.

A single coating of Galvicon brushing consistency will reportedly give a coverage of approximately 625 sq. ft. per gallon.

"Within 40 minutes after application, Galvicon will be tack-free and will be completely dry for use, within 48 hours," the company said. "The dried film of Galvicon contains nothing injurious to health."

Galvicon is available in cans in four sizes: 1/2 pint, quart, one gallon, and two gallons.



The San Francisco County Hospital where 11 Acme Industrial Unit Coolers are installed.



A hospital the size of the San Francisco County Hospital has numerous refrigeration needs. Chief among these is a system of food storage and care that affords maximum protection, minimum expense, and exceedingly quiet operation. Acme Industries helped the San Francisco staff solve their problems through the installation of 11 Blo-Cold Industrial Unit Coolers. The units were installed in rooms used for storing meats, vegetables, milk, salads, desserts, butter, eggs, cheese; and in chilling rooms, dry storage rooms and the bakery.

Installation was made by Scott Co., a local firm of engineers, and has been in operation for 4 years. The original installation precautions have resulted in the constant maintenance of correct temperatures. The staff completely approves the cooling efficiency and applauds the dependable operation. Write today for catalog 932-AC.

(a) The Produce Storage Room where an Acme Blo-Cold protects perishable vegetables.

(b) The Acme Blo-Cold Industrial Unit Cooler.



ACME INDUSTRIES, INC.

Mfgs. of a complete line of Air Conditioning and Refrigeration Equipment

JACKSON, MICHIGAN



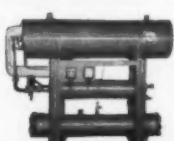
Evaporative Condensers
Cooling Towers
Floor-type Unit Coolers



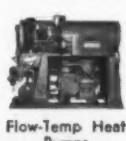
Direct Expansion (Dry-Ex) and Flooded Liquid Chillers
Heat Exchangers,
Oil Separators



Shell and Tube, Shell and Coil Condensers
Receivers, Pipe Coils



Packaged Liquid Chillers to 225 tons



Flow-Temp Heat Pumps
Flow-Cold Liquid Chillers

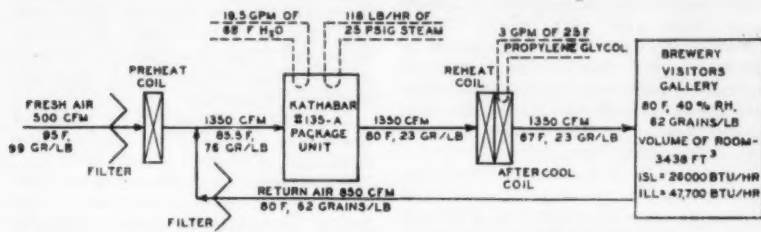


Remote Room Conditioner

Continuously serving the air conditioning and refrigeration industry since 1919

Dehumidifier Did the Trick

Air Cooled Gallery Was Comfortable But Visitors Couldn't See Beer Processing for Fogged Windows



SCHEMATIC FLOW DIAGRAM of air conditioning system for Miller's visitor gallery. Sub-freezing 28° F. dewpoint air is delivered to area to prevent moisture condensation on observation windows.

MILWAUKEE—No visit to Milwaukee would be complete without a trip through one of this city's many famous breweries. Miller Brewing Co., for example, brewers of the widely-acclaimed "Miller High Life" beer, has daily guided tours for all visitors. During this tour, it is possible to view part of the 52 Borsari fermenting tanks, suspended in the fermentation room of Stockhouse "F," from a specially-constructed vantage point, the visitors gallery.

Year-round, this gallery is kept at comfortable air conditions, whereas the fermentation room with its ebullient tanks is held at a constant 38° F. temperature at all times. But at times it has been embarrassing for Miller's guides to find the plate glass windows, through which visitors were to see the tanks, fogged upon the group's arrival at the gallery.

Moisture Load Caused 'Sweating'

If the windows were not fogged prior to the group's entry into the gallery, they shortly began to "sweat" as the visitors attempted to peer through the panes, due to the added air moisture load coincident with a human assemblage.

Existing air conditioning at Miller's had little provision for extracting excess moisture from the gallery room air. The cold, damp air in the refrigerated fermentation room tended to chill the plate glass windows. The warmer, more humid air in the gallery would, upon contact with the panes, be chilled to below its dewpoint. In so doing, the gallery room air would deposit its excess moisture upon the observation windows.

This "sweating" by the windows did not blend with Miller's spotlessly clean housekeeping policy. And the very purpose of the visitors gallery was being nullified by this most exasperating phenomena.

Chemical Absorbent Tried

Therefore, management installed a chemical absorbent liquid-type dehumidifier to condition the air to be supplied to this gallery. Purpose of this equipment is to provide a comfortable air condition while, simultaneously, caring for the moisture load caused by the influx of a maximum of 40 people into this 3,438-cu. ft. fifth floor mezzanine space.

With the initial operation of the dehumidifier, this purpose was fully realized; the observation windows have not fogged since, says D. M. Valentine, engineer with Surface Combustion Corp.

Shown here is a schematic flow diagram of the visitors gallery air conditioning system. To keep a fresh and invigorating atmosphere in the area and to keep the room under a slight positive pressure, 500 c.f.m. of outside air at conditions of 95° F. and 99 grains/lb. are introduced into the line, passing through a filter. All figures noted on the diagram represent

maximum operating conditions, explains Valentine.

"This fresh air is mixed with 850 c.f.m. of filtered recirculated air, at the gallery conditions of 80° F. and 62 grains/lb. (40% r.h.). Resultant 1,350 c.f.m. mixture conditions become 85.5° F. and 76 grains/lb. as the air enters the Kathabar humidity conditioner, manufactured by Surface Combustion Corp.

"Entering air immediately makes contact with the lithium chloride-base absorbing solution for dehumidification purposes, and both pass over a set of cooling coils within the air washer chamber of this 1,350 c.f.m. capacity unit," said Valentine.

Capacity Increases with Cooling

"The amount of moisture which the absorbent is capable of retaining is determined by its temperature. As it is cooled, its capacity increases manifold. Hence, primary purpose for the cooling coils is to control the absorbent temperature for proper air dehumidification, although the coils do effect an air temperature reduction. At Miller's, approximately 19.5 g.p.m. of 68° F. lake water are circulated through the coils under maximum conditions."

Upon leaving the Kathabar unit, the air has been both dehumidified and cooled to 23 grains/lb. and 80° F. Moisture removed under these conditions amounts to 45.5 lb./hr., or 140 gal./day. In order to allow for an air temperature pick-up in the gallery, the air is subsequently cooled by a conventional coil to 67° F., with the grain content remaining constant. Delivery to the gallery area of this conditioned air is then completed.

Aids Bacteria Removal

"As indicated in the diagram, the internal latent load is far heavier than the sensible heat load. This air conditioning system is responsible for handling a moisture load of 3,691 grains/min., or approximately 31.5 lb./hr. It is sufficiently noteworthy to add that the dehumidifier tends to remove bacteria from the air, helping to maintain healthful conditions in the gallery," Valentine adds.

"Once the air conditioning requirements are determined, operation of the dehumidifier is entirely automatic and continuous to insure a supply of properly balanced air. Rate of flow of the cooling medium is the important variable which regulates the amount of dehumidification, and this flow is governed by automatic controls. No manual controls are required.

"In contrast to other systems, there is no 'carryover' of the absorbing solution, entrapped in the leaving air, into the conditioned area. Too, this absorbent develops a protective coating on all metal surfaces with which it makes contact, thereby preventing corrosion of these parts, a common ailment with conventional air washers," he stated.

"After completing the dehumidifying pass, a small portion of the moisture-laden absorbent is pumped automatically and intermittently to the regenerator chamber of the humidity conditioner package unit. The equipment is termed a 'package unit' due to the air washer and regenerator chambers being mounted on a common base.

"In the refrigerator section, the absorbing solution passes over steam coils so as to drive off the excess moisture. Roughly, 118 lb./hr. of 25 p.s.i.g. steam are utilized for this purpose. This unwanted moisture is then exhausted by a scavenging air stream to the outdoors, and the absorbent is returned to the air washer chamber for another series of dehumidifying passes."

In winter operation maintained gallery conditions are 70° F., 44 grains/lb. (40% r.h.). Minimum outside design conditions of -10° F. require preheating of the fresh air by 5 p.s.i.g. steam coils to 55° F. prior to mixing the fresh air with that recirculated from the space. Further heating is also necessary by the same 5 p.s.i.g. steam supply in the reheat coil so as to attain a delivery temperature of 87° F. The internal sensible heat load jumps considerably during the winter season to 52,300 B.t.u./hr. due to this high delivery air temperature.

In over-all brewery operations, air conditioning is a vital factor. The entire air supply to Stockhouse "F," in which the visitors gallery described is located, is cleaned by an electrostatic filter. The air is held at constant temperatures and regulated by delicate instruments. In fact, pure air and closely controlled temperatures are indispensable to insure the continued production of Miller's beer.



Westinghouse Franchises Luedcke on A.C. Equipment

AUSTIN, Texas—A franchise to sell Westinghouse self-contained air conditioning equipment has been awarded the Luedcke Engineering Co. here. The announcement was made by W. B. Cott, sales manager of the Westinghouse Electric Corp.'s Air Conditioning Div.

William H. Luedcke, owner of the firm, served as a Westinghouse district air conditioning application engineer from 1944 to 1946. He founded the Luedcke Engineering Co. in 1950 and now maintains a complete sales and service department for air conditioning, heating, and ventilating equipment.

Air Conditioning Planned For \$100,000 Office Bldg.

MEMPHIS—Construction is scheduled to get under way about March 1 on a \$100,000 office building to be built by Dr. R. Roy Bourgoynne at 1085 Madison.

The entire two-story building, to be air conditioned throughout with individual control for each tenant, will face 50 ft. on Madison and will be 110 ft. deep.

Airtemp 'Prestige' Booklet Helps Philadelphia Dealers

PHILADELPHIA — An attractive two-color cover featuring a panorama of downtown Philadelphia with an impressive list of "prestige" names, and 36 inside pages listing Philadelphia area Chrysler Airtemp users comprise a booklet designed to help sell more Chrysler Airtemp air conditioners next year than ever before in Philadelphia.

The S. S. Fretz, Jr., Co. of this city, Chrysler Airtemp distributor, recently compiled the booklet for dealers and salesmen covering eastern Pennsylvania, southern New Jersey, and Philadelphia itself.

The booklet lists more than 1,800 Chrysler Airtemp customers. Also revealed is the type of business the user conducts, and whether or not the air conditioner has been installed in a residence.

The booklet is printed in three sections, one for each sales area. Each section has its distinctive color. The sections can be re-organized to feature a specific area.

In addition to creating a favorable impression on prospects, the Fretz booklet is an invitation for him to contact any user listed for personal information about installations.

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The internally mounted motor not only insures space economy and by eliminating all belts and pulleys, it cuts the cost, ends a major maintenance problem... a design simplification that pays dividends in many, many years of superior service. To give you complete freedom in designing your cooling equipment, the 9"

Brundage Blower may be furnished with mounting legs which allow you to place the unit in any convenient position... with full assurance of peak operating efficiency.

Test a Brundage 9" Blower in your own engineering department. Learn how Brundage design, construction and performance can add a new measure of quality to your products. We will be happy to provide everything you need to make a careful evaluation.

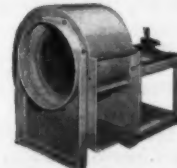
Ask about the Brundage production program. It is planned to simplify your inventory problems and free capital which might be tied up in blower stocks.



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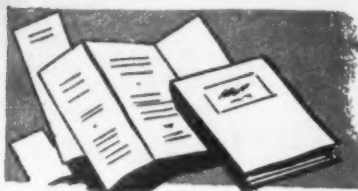
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Air Conditioning & Refrigeration News.



Current LITERATURE available

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Catalog Page Issued on Sherer Produce Case

—KEY NO. P-230—

MARSHALL, Mich.—A catalog page illustrating and describing the Sherer model UL2700 produce case with sliding mirrors has been published by the Sherer-Gillett Co. here. The sheet also shows how the case can be converted to four different types of use.

Booklet Describes D-H PF Evaporative Condensers

—KEY NO. P-231—

LOS ANGELES—An illustrated, 4-page booklet recently issued by Drayer-Hanson, Inc., points up the features of the company's newly-designed line of evaporative condensers known as "Perma-Fan" (series PF).

The new series, still based on the D-H pioneered blow-through principle of locating fans in the moisture-free area of the supply air stream to guarantee elimination of rust or corrosion, also features the latest

advances in housing construction, eliminators, headering, pumps, sump pan drainage, and finish.

Photographs and cutaways compare original evaporative condenser models (one of which has given continuous, trouble-free performance at Fine's Food Center, Sun Valley, Calif., since 1939) with the redesigned, improved series.

Summarized is information on flexibility, maintenance, and ratings available. Specifications and dimension tables are included, as well as photographic coverage of other Drayer-Hanson manufactured products that work in conjunction with Perma-Fan.

Bally Sales Manual Gives Information on Entire Line

—KEY NO. P-232—

BALLY, Pa.—A new pocket-size, leather-bound sales manual has been made available by Bally Case & Cooler Co. here to firms selling refrigerated cases and coolers.

The manual, a 5-in. by 7-in. loose leaf booklet, contains a complete description of the entire Bally prod-

uct line along with dimensions, photographs, service and operating data, specifications, and application data.

Principal advantage of the manual is that it combines the information normally found in six to ten product bulletins in one compact booklet, the company noted. It contains approximately 200 pages.

Douglas Scheffley, Bally advertising manager, reports that the manuals are now being distributed to the company's salesmen, dealers, and distributors.

Henry Valve Issues New Catalogs on All Products

—KEY NO. P-233—

MELROSE PARK, Ill.—Three new catalogs and accompanying price schedules covering the complete line of Henry products have been issued by the Henry Valve Co. here.

Catalog No. 101 describes Henry's current line of "Freon" products and supercedes previous catalog numbers 100 and 700. Catalog No. 201 relates to ammonia products and supercedes the previous section "B" to Catalog No. 100.

Bulletin No. 71 covers the current line of steel fittings and supercedes previous Catalog No. 70.

The new price schedules accompanying these catalogs combine list prices, discounts, and net prices in various quantity brackets on the same sheet. List prices are not shown in the new catalogs so that the catalogs will not become obsolete whenever future price revisions are necessary.

Copies of the catalogs and price sheets are available on request.

Tenney Bulletin Covers Refrigeration Coils, Pans

—KEY NO. P-234—

NEWARK, N. J.—Tenney Engineering, Inc., offers a four-page, two-color bulletin on its new line of junior size coils and drip pans. Called "Tenneyaire Jr.," this equipment is designed for use in dairy boxes, butcher cases, top display, delicatessen cases, and single and double-duty show cases. Pans come separately or in combination coils.

A full page is devoted to drawings and tables giving dimensions of pans available for use with 30 different coil models. Data includes pan widths and lengths, hanger dimensions, and number of louvers.

Two tables give B.t.u./hr., number of tubes per coil, over-all dimensions and list price of coil-and-pan combinations for display, and dairy wall cases. Standard combinations are available for 4, 5, 6, 8, 10, and 12-ft.-long display cases and 6, 8, 10, and 12-ft.-long dairy wall cases.

A third and final table tells how to compute the price and order pans in virtually any desired width and length.

Anaconda Issues Booklet on Radiant Panel Heating

—KEY NO. P-235—

WATERBURY, Conn.—A booklet on "Radiant Panel Heating with Pre-Formed Anaconda Copper Tube Panel Grids" was issued recently by the American Brass Co. here.

The 20-page booklet describes the grids, points out their advantages, shows various types of installations, gives suggestions for planning a radiant panel installation, and provides seven helpful technical tables.

A supplemental folder provides engineering data and PG layout of a ceiling panel installation for a typical low-cost five-room house.

EEI Offers 6th Edition Of 'I Want To Know' Book

—KEY NO. P-236—

NEW YORK CITY—The 1953-1954 edition of "I Want to Know About the Electric Industry," an information booklet, has just been published by the Edison Electric Institute.

Subtitled "the answers to 28 questions frequently asked the Institute," the booklet consists primarily of single page presentations of each question, with a brief answer, and tabular and explanatory material for a more extended answer to the question posed.

In most cases basic data is given in historically comparative form and the answers to the questions, collectively, provide a short, comprehensive story of electric industry operations, progress, and relationship to the national economy.

The material in the booklet is industrywide in scope. Most of the basic national data is derived from the EEI's annual Statistical Bulletin as well as from various publications

of the Federal Power Commission.

The booklet answers questions dealing not only with such far-reaching matters as "How does the United States rank in world production of electricity?" and "How fast is it moving in production and generating capacity?" but discusses as well more immediate topics such as "Who uses how much? What about electricity at home? Who owns the electric industry? Who produces and sells the greatest percentage of electricity?"

In addition to general coverage of industrial, commercial, farm, and home use of electric power, such subjects as revenues and expenses, fuel consumption, steam plant and water power installations, and ownership trends of generating installation are also discussed.

Originally conceived to fill a need for an accurate, concise presentation of facts and figures concerning one of the nation's most vital industries, the booklet is now in its sixth annual edition.

Bulletin Gives Data on Two Series of Barrymounts

—KEY NO. P-237—

WATERTOWN, Mass.—Detailed technical and application information on Series 262 and Series 633 "Barrymounts," designed to isolate vibration and noise caused by motors or motor-driven equipment applying static loads of 30 to 260 lbs. to each unit isolator, is provided in Bulletin 537 issued recently by the Barry Corp. here.

Included are data on dimensions and load ratings, installation procedure, variation of natural frequency with load, and percent efficiency of isolation.

Isolation of 60% to 85% of structure-borne vibration is obtained at 20 cps (1,200 r.p.m.) and 95% or better at 1,800 r.p.m.

Patterson-Kelley Offers Hot Water Heater Catalog

—KEY NO. P-238—

EAST STROUDSBURG, Pa.—A new 48-page catalog, offered by the Patterson-Kelley Co., Inc., here pictures and describes the complete line of P-K hot-water storage heaters and presents information on piping arrangements and installation data.

Horizontal and vertical heaters in steel, copper lined, copper-silicon, cement lined, clad and galvanized construction, as well as the low-flow design are each cataloged as to weights, dimensions, construction details, and capacities—with conversion tables.

Piping diagrams are given for high and low pressure steam systems. Also included is a step-by-step guide for setting up and connecting a storage heater.

Listed are average water requirements of typical hot water fixtures in various types of buildings with examples to show how hot water requirements may be calculated, capacity requirements determined, and heaters specified.



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You'll get more work done in less time and at lower cost with new '54 Chevrolet trucks on the job. They bring you more new features . . . more big new advantages than any other truck on the road.

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In addition, you enjoy new and even greater operating economy. All three 1954 Chevrolet truck engines bring you the full benefit of thrifty high-compression power.

And there are many, many more new things you'll like about these great new Chevrolet trucks. New, roomier pickup and stake bodies let you haul more . . . save you time and extra trips. And they're set lower to the ground for easier loading

and unloading. New truck Hydra-Matic transmission* lets you drive all day without shifting. It's offered not only on ½- and ¾-ton Chevrolet trucks, but on 1-ton models, too. New Comfortmaster cab with one-piece curved windshield and amazing new Ride Control Seat* offers the last word in comfort, convenience and safety.

Plan now to see your Chevrolet dealer and get all the facts about the new Chevrolet trucks for '54. . . Chevrolet Division of General Motors, Detroit 2, Michigan.

Most trustworthy trucks on any job!



ADVANCE-DESIGN TRUCKS

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Long Beach--

(Concluded from Page 1, Column 5) hold a convention of the California State Association of RSES in Long Beach in conjunction with the conference.

Exhibits will be open Thursday and Friday from 3 to 6 p.m. and from 7 to 10 p.m. Exhibits will open at noon on Saturday and close at 6 p.m.

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Named Fedders Distributor

CHARLOTTE, N. C.—Announcement is made by W. W. Pruitt, vice president and sales manager of Appliance Service Corp., that his firm has been appointed distributor for Fedders room air conditioners in North Carolina and also in Piedmont, S. C.

Typhoon Holding Regional Training Meetings for Dealers

ST. LOUIS—The lure of special training in air conditioning brought dealers from as far away as Pensacola, Boston, and Montreal, to St. Louis to attend the first of a series of regional training schools offered by the Typhoon Air Conditioning Co., Inc.

According to Mark E. Mooney, vice president and sales manager of Typhoon, the company has "revived its dealer training program after a hiatus of several years, in order to keep up with the rapid expansion of Typhoon's national dealer organization." School sessions, each lasting a week, are being conducted by Mooney, with the help of Arthur H. Farr, Typhoon's chief field engineer.

The next Typhoon school session will start March 15, in Los Angeles, and following that there will be another starting March 22, in New York.

EXPANSION PROGRAM

"Ordinarily," says Mooney, "dealer training can be handled informally through routine visits by Typhoon personnel to the dealer's own establishment, or by inviting dealers to the factory. During an expansion program, however, this system is inadequate."

THOSE WHO RECEIVED DIPLOMAS

Following are the sales engineers who received diplomas at the Typhoon St. Louis School:

Hugh Gilmore, W. H. Andrews, Jr., from Hugh Gilmore Refrig. Service, Pensacola, Fla.; Donald E. Baker, Thos. H. Thompson, Glen H. Woods, from Baker Ward, Inc., South Bend, Ind.; Tom Barrett, from Barrett Refrig. Co., Brookline, Mass.; A. Colford, Anthony E. Ede, Harold Gee, from Linde Canadian Refrig. Co., Ltd., Toronto, Ont., Can.; Earl K. Cullom, Walter R. Hetz, Sr., R. C. Judge, Bernard Kline, Raymond Perry, Edward L. Pohl, E. H. Woestendiek, from Hampton Electric Co., St. Louis.

R. R. Ward, Michael E. DiBella, from Artercraft Store Equipment Co., Kansas City; Herman J. Duke, from Herman J. Duke Co., Richmond, Va.; Wm. A. Eger, from Quality Heating Supply Co., Inc., Cincinnati; Ivan J. Falconer, James A. Kelly, from Falconer Refrigeration Co., Springfield, Ill.; Robert T. Flament, from Bell Refrig. Corp., Cleveland; A. N. Friedman, from Friedman Electric Equipment Co., Nashville, Tenn.; Earl G. Gerard, from Southern Indiana Ajax Co., Evansville, Ind.

Joe W. Harvey, from Harvey's Refrigeration Sales & Service Co., Cape Girardeau, Mo.; H. G. Henderson, from Henderson Refrigeration Co., Abilene, Texas; Jos. O. Hidalgo, from Jos. Hidalgo & Son, New Orleans; Erhart Holst, from Madsen Supply Co., Omaha, Neb.; R. R. Koepsell, from Kep's Refrigeration Co., Cedar Rapids, Iowa; Clyde Lancaster, Sam B. Renneker, from Lancaster Equipment Co., Birmingham, Ala.; M. O. Mathews, Lloyd Seymour, from Rogerson Coal & Heating Co., Inc., Jacksonville, Ill.; Max Miller, from Miller & Co., Ft. Thomas, Ky.; Bernie Mayer, from Alberni Universal Ltd., Toronto, Ont., Can.; Norman Doyle, Robert Ogden, from Iron Fireman Corp., St. Louis; Cyril D. Schultz, from Cyril D. Schultz Co., Erie, Pa.; B. E. Simpson, Logansport, Ind.; John Soltsburg, from Builders Supply Co., Aurora, Ill.

Canadian Show--

(Concluded from Page 1, Column 3) campaign, and in addition a couple of special events are being promoted to attract public interest. One is a "Heat Your Home With Refrigeration" demonstration of a heat pump; and another is the use of a portable ice skating rink on which fancy skaters will perform.

A special luncheon for exhibitors will be held Thursday noon, Feb. 25.

The Canadian RSES will hold its annual convention in Toronto Feb. 21, 22, and 23. Monday session will be held at the King Edward hotel in Toronto, and Tuesday and Wednesday morning sessions will be held in the Coliseum.

Following is the official program of the RSES meeting:

MONDAY, FEB. 22

10 a.m. Opening talk by President Ken Woods, introduction of International officers.

10:45 a.m. Secretary and Treasurer Report.

11 a.m. Report of Standing Committees.

1:30 p.m. "Information Please."

2 p.m. "Heat Pumps" by J. F. Townsend, John Inglis Co., Ltd.

3 p.m. "The Refrigeration Storage Battery," by J. E. Hutchinson, Dole Refrigerating Products Ltd.

4 p.m. "Characteristics of Refrigerants," by Paul B. Reed, Educational Director of RSES.

TUESDAY, FEB. 23

9:30 a.m. "Information Please" session.

10 a.m. "Automobile Air Conditioning," D. C. McCoy, Frigidaire Div., General Motors Corp.

11 a.m. "Application and Service of Room Air Conditioners," G. E. Schwartz, Fedders-Quigan Corp.

12 noon. Opening of the Canadian Refrigeration and Air Conditioning Show.

7 p.m. Banquet and dance sponsored by the Ontario Maple Leaf Chapter, RSES.

WEDNESDAY, FEB. 24

9:30 a.m. "Information Please."

10 a.m. "Electric Defrost Controls," R. H. Luscombe, Penn Controls, Inc.

11 a.m. Election of officers.

Heck Heads Westinghouse Plumbing Distribution

MANSFIELD, Ohio—Appointment of A. R. Heck as manager of plumbing distribution for the Westinghouse Electric Appliance Div. headquartered here has been announced by R. J. Sargent, manager of major appliances.

Heck will be responsible for the distribution of dishwashers, water heaters, water coolers, and food waste disposers through wholesale plumbing distribution. He will report directly to Sargent.

Formerly, Heck was merchandise manager of plumbing and heating distribution, and prior to that was merchandising manager of the household refrigeration department, a position he had held since his appointment in 1943.

He joined Westinghouse at Mansfield in 1936, was transferred to the Westinghouse Electric Supply Co.'s Cleveland office in 1940, and returned to the Mansfield headquarters office in 1943.



A. R. Heck

3-D and Cheesecake Prove Winning Combination In Promotion of Viking Products

CLEVELAND—Mixing 3-D pictures of Viking products with a dash of cheesecake has proved to be a winning sales combination for the Viking Air Conditioning Corp.

Viking first used 3-dimension pictures in a set of 8 slides for a stereo viewer, featuring the window exhaust fan. Later, Viking set up a 3-D Peep Show with the old time penny arcade drop-card machines. These promotions in 1952 and '53 resulted in the highest advance orders in the company's history, it is claimed.

Viking has now prepared an inexpensive 3-D advertising piece in the form of a book presentation for distributor salesmen. The book contains 11 3-dimension pictures introducing the 1954 Viking window fan. Each book, including 2 pair of 3-D glasses, costs only \$1.50.

In this presentation, each picture is set up with two stereoscopic images slightly overlapping each other, one in red, one in blue. Viewed through the red and blue glasses, the double images merge into a single picture with natural-looking depth.

Each picture also has a differently-shaped black outline which creates even further depth than is usually accomplished through ordinary 3-D methods. It is actually possible to see what is behind the outline, giving a Peep Show effect to each page. This is the same Peep Show idea Viking used at the 1952 Air Conditioning Exposition and the 1953 National Association of Home Builders Show.

To carry on the cheesecake appeal, the new Viking #955 window fan shares the 3-D spotlight with a curvaceous young lady dubbed "Aerodynamic Ann." "Ann" conducts an imaginary tour through the pictures from one highlight of the Viking fan to another.

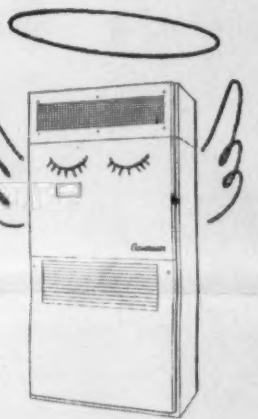
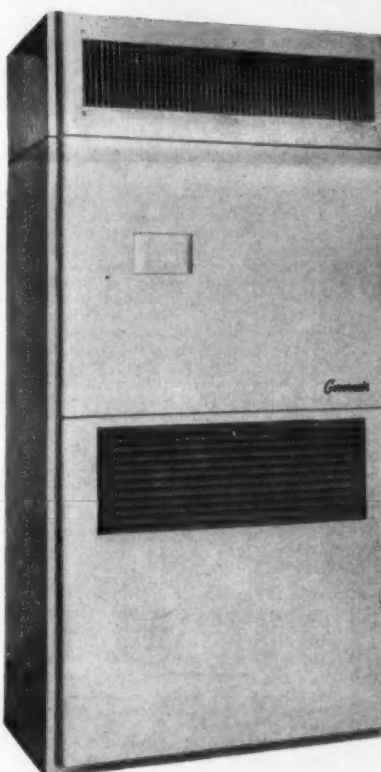
"Ann" even coaxes the most dignified viewer to wink at one special picture. It's a new Viking version of the old "Before" and "After" theme. Looking through the red and blue glasses, you wink the right eye to see a "before" picture: wink the left eye to see a pleasant "after" picture of Viking cooling.

Creation of this 3-D presentation was a cooperative effort with production by Carr Liggett Advertising, Inc., photography by Williams and Gilmore of Detroit Studios, and printing by the D. E. Robinson Co. . . . all of Cleveland. The original idea was master-minded by George O. Gould, advertising manager, of the Viking Air Conditioning Corp.

Ogdensburg Appliance Show Slated for Feb. 25-27

OGDENSBURG, N. Y.—The annual Appliance Show sponsored by the Ogdensburg Chamber of Commerce will be held Feb. 25-27, it was announced by Roger F. Dufort, executive secretary of the Chamber. The show will be held at the State Armory, with area appliance dealers participating.

An "Upright" Air Conditioner!

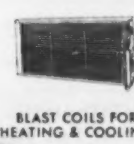


Governair Type SC Conditioner

Yes, this is an upright Governair self-contained conditioner—but that's not the reason for the halo.

The halo is there because this air conditioner behaves itself! Built to perform true air conditioning quietly and efficiently . . . it does just that! Flexibility, compact design, easy installation, dependability and economy are among its many virtues.

Available in capacities from 3 to 15 tons, the Governair Type SC Conditioner is the answer to your air conditioning needs in commerce, institutions, factories and homes. Choose Governair . . . originators* of completely packaged air conditioners!



AIR CONDITIONERS

COMPLETELY PACKAGED AIR CONDITIONERS

BLAST COILS FOR HEATING & COOLING

EVAPORATIVE CONDENSERS

GOVERNNAIR

*Type SCU Conditioners Patent No. 2,297,928

GOVERNNAIR CORPORATION • 513 N. Blackwelder • Oklahoma City, Okla.



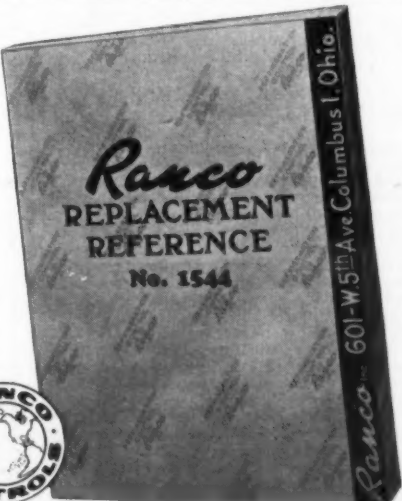
Best Line In Town!

Talk about a line! Ranco's Replacement Reference No. 1544 lists almost 5000 controls! It's the most complete line in the industry. You'll find in this one source an alphabetical listing of refrigeration manufacturers, trade names, and Ranco replacement part numbers. See this bigger, better, new manual at your Ranco wholesalers, or get a copy from him for your own use on the job and in your shop.

Ranco Inc.

COLUMBUS 1, OHIO

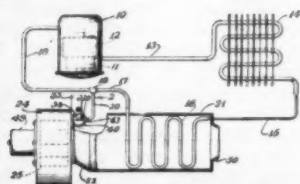
WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS



PATENTS

Week of October 27

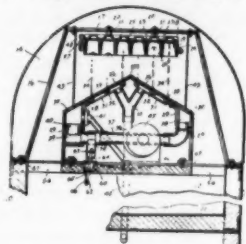
2,656,685. **OVERLOAD LIMITING DEVICE.** William F. Borgard, Evansville, Ind., assignor to International Harvester Co.



1. In a refrigeration system having an evaporator disposed within a duct system and having a centrifugal type fan for moving air over said evaporator through said duct system, means for preventing overload of the motor-compressor unit of said refrigeration system comprising an elliptical damper, a bell-crank, a bellows, a thermally sensitive element, and biasing means, said bell-crank formed to be pivotally mountable to one side of the fan housing, said elliptical damper mounted to one arm of said bell-crank so that said bell-crank is pivotable on said fan housing to move said elliptical damper over a portion of the inlet hole of the fan housing, said bellows pivotally connected at one end thereof to the other arm of said bell-crank, the other end of said bellows being connected to said biasing means, said biasing means operable to adjust the range of movement of said

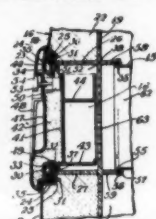
bell-crank in regard to said fan housing, said thermally sensitive elements connectable in thermal contact with the condenser of said refrigeration system and connected to said bellows, said thermally sensitive element operating responsive to temperature changes of said condenser to cause an expansion and contraction of said bellows, whereby the inlet to said fan housing is closable to a degree dependent upon the temperature of said condenser and the adjustment of said biasing means.

2,656,686. **ICE MAKING MACHINE.** John R. Bayston, Van Nuys, Calif., assignor to John R. Bayston, as trustee, Icecrafters (Liquidating) Trust, Van Nuys, Calif.



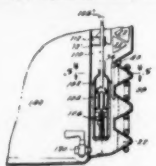
1. In an ice making machine, the combination with an evaporator unit including a series of closely associated inverted freezing cells having interior wall surfaces and being closed at the top and open at the bottom, means to refrigerate the wall surfaces of said cells to cool the liquid received therein and produce an ice deposit in the form of ice cubes, means for defrosting said wall surfaces for freeing the frozen ice cubes to drop therefrom by gravity, a stationary diverter having a pair of oppositely inclined plates positioned directly under said evaporator and plates therefrom to receive and divert the freed ice cubes to an ice bin, a series of spaced nozzles mounted in said plates positioned to discharge a forced stream of liquid directly upwardly into the central top of said cells respectively, pressure tubes associated with said nozzles, a header mounted on the under side of said plates communicating with said tubes, a reservoir positioned below the lower edges of said plates for receiving freed liquid shed thereby, an overflow pipe for said reservoir, a flow connection therebetween, and a pressure pump having its intake communicating with said flow connection and discharging into said headers.

2,656,688. **REFRIGERATOR DOOR WITH A COMPARTMENT.** Lester H. Hinkel, Evansville, Ind., assignor to International Harvester Co.



1. A refrigerator comprising a cabinet having a food storage chamber which is provided with a door opening, a door movable to open and close said door opening, said door having a compartment therein and being provided with a front opening which furnishes access into said compartment, a container slidably secured in said compartment and being adapted to be moved through said front opening, said container being provided with shelves for the storage of food articles, and said container having a front wall which closes said front opening.

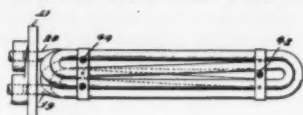
2,656,689. **METHOD OF AND APPARATUS FOR AUTOMATIC ICE MAKING.** Glenn Muffy, Springfield, Ohio.



1. In an ice-maker, a water container, means arranged for freezing less than the whole of the water in said container, agitating means comprising a sealed water-tight casing, a flexible tube connected with said casing for transmission of energy thereto, and a motor within said casing including means for producing vibrations which cause movement of said

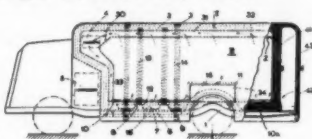
casing to agitate said water for the purpose of causing ice to be frozen in clear form.

2,657,090. **HEAT EXCHANGER.** Maurice H. Hofmeister, Evanston, Ill., assignor to Bell & Gossett Co., Morton Grove, Ill.



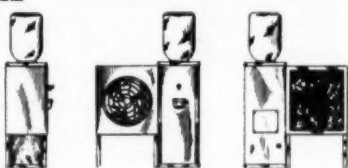
1. A heat exchanger including a plurality of connected, flat coils placed side by side in spaced and aligned relation to each other, each coil being continuous and elongated in shape and comprising spaced, parallel first and second straight legs, a first reverse bend connecting an end of the first leg to the adjacent end of the second leg, a third straight leg disposed between the first and second legs and connected by a second reverse bend to the other end of the second leg, the third leg angling towards the junction of the second leg with the first bend, and a fourth straight leg disposed between the first and second legs and connected at one end to the third leg by a third reverse bend positioned inwardly of the first bend, the opposite end of the fourth leg being reversely bent and terminating beside said other end of the second leg and said opposite end of the fourth leg being connected to the first leg on the adjacent coil, all of the legs in each coil lying substantially in the same plane, the angling of the third leg in each coil defining on opposite sides thereof triangular openings with the second and fourth legs and the alternate and intervening coils being relatively positioned so that the third therein respectively angle in different directions whereby the third and fourth legs in each coil substantially register with said openings, respectively, in the immediately adjacent coils to increase turbulent flow in the fluid passing over the coils.

2,657,092. **HEAT INSULATING BODY STRUCTURE FOR ISOTHERMAL AND/OR REFRIGERATOR VEHICLES.** Paul Georges Clement, Paris, France.



1. In an insulated automotive vehicle body including a chassis therefor, the combination of a pair of stringers secured on said chassis lengthwise thereof and providing spaced supports thereon in transverse alignment, a metallic sheet fitted on said supports in a plane substantially below the top faces thereof to provide an external floor for said body, a plurality of cross-members secured on said supports transversely of said stringers, a plurality of rectangular carline members secured to the opposite ends of said cross-members in upstanding bridging relation forming an inner framework on said chassis, a sheet metal shell secured interiorly of said framework, a metal plate secured on said cross-members forming a floor for said inner shell, a plurality of layers of insulating material between said body floor and said shell floor, an outer framework comprising a plurality of upstanding rectangular carline members disposed in spaced parallel relation mounting a sheet metal exteriorly thereof, a plurality of oppositely disposed bracket members secured to said chassis in offset relation thereto supporting said outer framework independently of and in spaced relation to said inner framework, and a plurality of layers of insulating material between said inner shell and said exterior shell in continuation of said first named layers of insulating material.

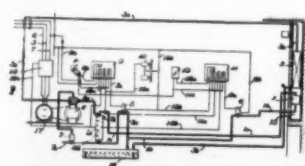
170,678. **COMBINED WATER COOLER AND FAN.** Benjamin Cisenfeld, Baltimore, Md.



The ornamental design for a combined water cooler and fan, as shown.

Week of November 3

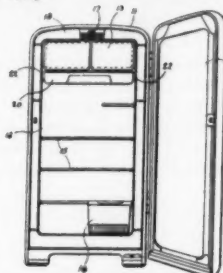
2,657,543. **METHOD AND APPARATUS FOR MAINTAINING TEMPERATURE AND HUMIDITY CONSTANT.** Theophil Eichmann, Berne, Switzerland, assignor to George B. Scarlett, Kennett Square, Chester County, Pa. Application Oct. 8, 1948, Serial No. 53,394. 7 Claims. (Cl. 62-4.)



1. A system for maintaining constant the temperature and the humidity of a space to be conditioned comprising, in combination, a refrigerating machine including, a refrigerant compressor, a liquid-cooled condenser, and a refrigerant evaporator in heat transfer relation with the space to be conditioned; an air-cooled condenser in heat exchange relation with the space to be conditioned and being connected in parallel with said liquid-cooled condenser; means for controlling the discharge of condensed refrigerant from said liquid-cooled condenser; means for cutting in and rendering active said air-cooled condenser to cause said compressor to function as a heat pump with said air-cooled condenser; temperature control means in the space to be conditioned in operative relation with said means for cutting out said liquid-

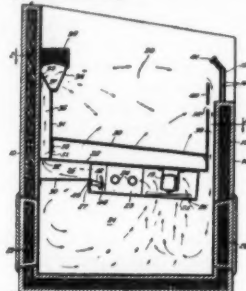
cooled condenser; and humidity controlled means in the space to be conditioned in operative association with said means for cutting in said air-cooled condenser.

2,657,544. **REFRIGERATOR TRAY.** Harold C. Mather, Elmwood Park, Ill., assignor to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application March 7, 1950, Serial No. 148,108. 6 Claims. (Cl. 62-89.)



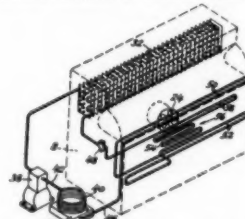
1. A refrigerator comprising a cabinet, a freezer compartment disposed in the top of said cabinet, a drawer disposed in said cabinet beneath said compartment, said drawer being adjustable vertically in said cabinet to be held in close juxtaposition to said compartment, and being insulated to allow frozen foods to be stored therein, and deflection means mounted in said cabinet adjacent the lower edges of said freezer compartment adapted to deflect cold air currents into said drawer.

2,657,545. **REFRIGERATED DISPLAY CASE.** Verne C. Knight, Michigan City, Ind., assignor to Bets Corp., Hammond, Ind., a corporation of Indiana. Application June 13, 1950, Serial No. 167,833. 13 Claims. (Cl. 62-89.5.)



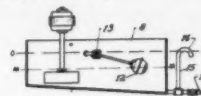
1. A refrigerated display case having an upper open-top compartment and a lower enclosed compartment, vertical walls forming said compartments and a horizontal partition separating said upper and lower compartments, a refrigerating unit disposed in said lower compartment adjacent said partition, said refrigerating unit having a relatively small vertical dimension so that it extends only in the upper portion of said lower compartment, duct means defining a cold air passage extending in said upper compartment adjacent one of said vertical walls and communicating with said refrigerating unit, duct means defining an exhaust air passage in said upper compartment adjacent the vertical wall opposite to said one wall and communicating with said lower compartment, said refrigerating unit having an intake portion communicating with said lower compartment, a discharge portion communicating with both said cold air passage and said lower compartment, and means for drawing air into said intake portion and discharging the same from said discharge portion, whereby first and second paths for refrigerated air are individually provided through said upper and lower compartments.

2,657,546. **SNOW ELIMINATOR FOR SELF-SERVICE CASES.** Victor W. Smith, Trenton, N. J., assignor to C. V. Hill & Co., Inc., Trenton, N. J., a corporation of New Jersey. Application July 2, 1951, Serial No. 234,834. 2 Claims. (Cl. 62-89.6.)



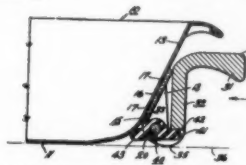
1. A refrigerated display case having a display space which is open at the top for access to customers, means presenting surfaces forming an air duct located in heat exchanging relation with said display space and leading from an air inlet adjacent the top of said display space to a blower, thence to an evaporator and back to the display space, a compressor for supplying refrigerant to said evaporator and a conduit carrying compressed and relatively warm refrigerant from the compressor to the evaporator and passing first into heat exchanging relation with said surfaces adjacent said air inlet for raising the temperature of said surfaces and thereafter passing into heat exchange relation with surfaces adjacent said blower for reducing the tendency for snow and ice crystals to accumulate thereon.

2,657,547. **AUTOMATIC SEDIMENT PURGER FOR TUBE ICE MACHINES.** Henry V. Heuser, Louisville, Ky., assignor to Henry Vogt Machine Co., Louisville, Ky., a corporation of Kentucky. Application May 29, 1950, Serial No. 164,575. 4 Claims. (Cl. 62-107.)



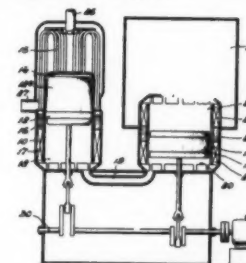
1. In a tube ice-making machine: a freezer providing tubes subject to alternate freezing and thawing temperatures and through which water to be frozen is passed; a water supply tank providing a low point to which sediment gravitates; means connected to a higher point in the tank for pumping water from the supply tank to the tops of the freezer tubes whereby during the freezing period a quantity of water is maintained in suspension; means controlled by the level of water in the tank for replenishing water in the tank to a predetermined level; means for stopping flow of water to the freezer tubes during the thawing cycle whereby the suspended water returns to the tank to raise its liquid level therein; and an overflow pipe having a bend positioned between said predetermined level and raised level connected to said low point of the tank to purge settled solids therethrough and to limit siphoning of water to the level of said bend.

2,657,548. **FREEZING PAN.** Arthur J. Frei, Sr., Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application June 29, 1951, Serial No. 234,314. 3 Claims. (Cl. 62-108.5.)



1. A freezing pan having an end wall, a handle for said pan pivoted to said end wall on a horizontal pivot pin located adjacent the bottom portion thereof, said handle having a lower cam portion so arranged as to press down upon a horizontal supporting surface for said pan when the upper portion of said handle is swung outwardly from said end wall to forcibly lift said pan from said supporting surface, and a resilient rubber bar mounted upon said pivot pin and extending transversely thereof, said bar having its two opposed end portions pressing against said pan and said handle respectively in such manner that said handle is at all times yieldably urged inwardly toward said end wall to a generally upright position whereat said cam portion lies above said flat supporting surface.

2,657,552. **HOT GAS ENGINE REFRIGERATOR.** Cornelius Otto Jonkers and Jacob Willem Laurens Kohler, Eindhoven, Netherlands, assignors to Hartford National Bank and Trust Co., Hartford, Conn., as trustees. Application April 17, 1951, Serial No. 221,366.



1. A closed system refrigerator having an amount of gas of invariable chemical composition as the working medium comprising at least two displacers adapted to move with a substantially harmonic motion and with a constant phase difference in relation to each other, each of said displacers being provided with two working surfaces, one working surface of one displacer defining one end of a hot space and acting upon a volume of gas in said hot space, the other working surface of said one displacer defining one end of a space of intermediate temperature and acting upon a volume of gas of intermediate temperature, one working surface of the other displacer defining the other end of said space of intermediate temperature and acting upon a volume of gas of said intermediate temperature, the other working surface of said other displacer defining one end of a cold space and acting upon a volume of gas in said cold space, the variations in volume of gas in hot space leading in relation to the variations in volume of gas in said cold space, the sum of said volumes being substantially constant, said hot space communicating with said space of intermediate temperature by means of a heater, regenerator and cooler, and said cold space communicating with said space of intermediate temperature by means of a freezer, regenerator and cooler.

(To Be Continued)

KEY TO PROFITS



C. PETE SUMMERS

As a dealer handling Bendix, Coleman, Kelvinator, Youngstown, Carrier Room Coolers, and other appliance lines, I read AIR CONDITIONING & REFRIGERATION NEWS regularly. I wouldn't want to be without it.

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AIR CONDITIONING & REFRIGERATION NEWS brings me the news I need every week. In many instances due to its complete and reliable news coverage it has not only tipped me off to sales ideas that have proved profitable, but also news tips that have saved me money.

Also I greatly enjoy reading that feature column that runs under the heading "Inside Dope" every week.

C. Pete Summers
Summers Pontiac & Appliances
127 W. Denman
Lufkin, Texas

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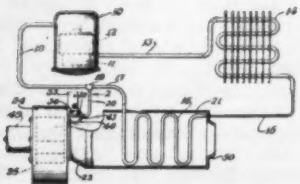
Amana Refrigeration, Inc. offers the following patent for non-exclusive licensing on reasonable terms. Applications for licensing may be addressed to Amana Refrigeration, Inc., Amana, Iowa.

Pat. No. 2,622,911. Refrigerator Cabinet Latch Strike. Patented December 23, 1952. Refrigerator cabinet latch strike having completely concealed mounting means for adjustment horizontally and inwardly and outwardly so that it will always be in proper alignment with the door to provide a tight seal. The exposed portion of the latch strike, which is especially pleasing in appearance, comprises a tubular shank forming a hook for cooperation with a latch mechanism embedded in the door.

PATENTS

Week of October 27

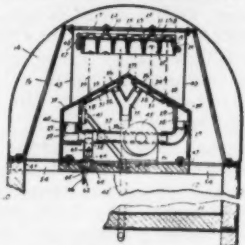
2,656,685. OVERLOAD LIMITING DEVICE. William F. Borgerd, Evansville, Ind., assignor to International Harvester Co.



1. In a refrigeration system having an evaporator disposed within a duct system and having a centrifugal type fan for moving air over said evaporator through said duct system, means for preventing overload of the motor-compressor unit of said refrigeration system comprising an elliptical damper, a bell-crank, a bellows, a thermally sensitive element, and biasing means, said bell-crank formed to be pivotally mountable to one side of the fan housing, said elliptical damper mounted to one arm of said bell-crank so that said bell-crank is pivotable on said fan housing to move said elliptical damper over a portion of the inlet hole of the fan housing, said bellows pivotally connected at one end thereof to the other arm of said bell-crank, the other end of said bellows being connected to said biasing means, said biasing means operable to adjust the range of movement of said

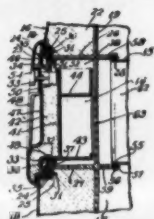
bell-crank in regard to said fan housing, said thermally sensitive elements connectable in thermal contact with the condenser of said refrigeration system and connected to said bellows, said thermally sensitive element operating responsive to temperature changes of said condenser to cause an expansion and contraction of said bellows, whereby the inlet to said fan housing is closable to a degree dependent upon the temperature of said condenser and the adjustment of said biasing means.

2,656,686. ICE MAKING MACHINE. John R. Bayston, Van Nuys, Calif., assignor to John R. Bayston, as trustee, Icecraft (Liquidating) Trust, Van Nuys, Calif.



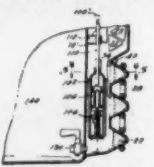
1. In an ice making machine, the combination with an evaporator unit including a series of closely associated inverted freezing cells having interior wall surfaces and being closed at the top and open at the bottom, means to refrigerate the wall surfaces of said cells to cool the liquid received therein and produce an ice deposit in the form of ice cubes, means for defrosting said wall surfaces for freeing the frozen ice cubes to drop therefrom by gravity, a stationary diverter having a pair of oppositely inclined plates positioned directly under said evaporator and plates therefrom to receive and divert the freed ice cubes to an ice bin, a series of spaced nozzles mounted in said plates positioned to discharge a forced stream of liquid directly upwardly into the central top of said cells respectively, pressure tubes associated with said nozzles, a header mounted on the under side of said plates communicating with said tubes, a reservoir positioned below the lower edges of said plates for receiving freed liquid shed thereby, an overflow pipe for said reservoir, a flow connection therebetween, and a pressure pump having its intake communicating with said flow connection and discharging into said headers.

2,656,688. REFRIGERATOR DOOR WITH A COMPARTMENT. Lester H. Hinkel, Evansville, Ind., assignor to International Harvester Co.



1. A refrigerator comprising a cabinet having a food storage chamber which is provided with a door opening, a door movable to open and close said door opening, said door having a compartment therein and being provided with a front opening which furnishes access into said compartment, a container slidably secured in said compartment and being adapted to be moved through said front opening, said container being provided with shelves for the storage of food articles, and said container having a front wall which closes said front opening.

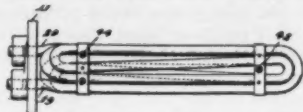
2,656,689. METHOD OF AND APPARATUS FOR AUTOMATIC ICE MAKING. Glenn Muffy, Springfield, Ohio.



1. In an ice-maker, a water container, means arranged for freezing less than the whole of the water in said container, agitating means comprising a sealed water-tight casing, a flexible tube connected with said casing for transmission of energy thereto, and a motor within said casing including means for producing vibrations which cause movement of said

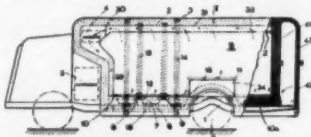
casing to agitate said water for the purpose of causing ice to be frozen in clear form.

2,657,020. HEAT EXCHANGER. Maurice H. Hofmeister, Evanston, Ill., assignor to Bell & Gossett Co., Morton Grove, Ill.



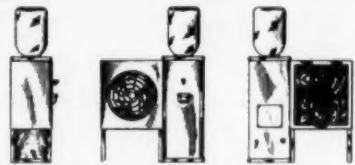
1. A heat exchanger including a plurality of connected, flat coils placed side by side in spaced and aligned relation to each other, each coil being continuous and elongated in shape and comprising spaced, parallel first and second straight legs, a first reverse bend connecting an end of the first leg to the adjacent end of the second leg, a third straight leg disposed between the first and second legs and connected by a second reverse bend to the other end of the second leg, the third leg angling towards the junction of the second leg with the first bend, and a fourth straight leg disposed between the first and second legs and connected at one end to the third leg by a third reverse bend positioned inwardly of the first bend, the opposite end of the fourth leg being reversely bent and terminating beside said other end of the second leg and said opposite end of the fourth leg being connected to the first leg on the adjacent coil, all of the legs in each coil lying substantially in the same plane, the angling of the third leg in each coil defining on opposite sides thereof triangular openings with the second and fourth legs and the alternate and intervening coils being relatively positioned so that the third therein respectively angle in different directions whereby the third and fourth legs in each coil substantially register with said openings, respectively, in the immediately adjacent coils to increase turbulent flow in the fluid passing over the coils.

2,657,028. HEAT INSULATING BODY STRUCTURE FOR ISOTHERMAL AND/OR REFRIGERATOR VEHICLES. Paul Georges Clement, Paris, France.



1. In an insulated automotive vehicle body including a chassis therefor, the combination of a pair of stringers secured on said chassis lengthwise thereof and providing spaced supports thereon in transverse alignment, a metallic sheet fitted on said supports in a plane substantially below the top faces thereof to provide an external floor for said body, a plurality of cross-members secured on said supports transversely of said stringers, a plurality of rectangular carline members secured to the opposite ends of said cross-members in upstanding bridging relation forming an inner framework on said chassis, a sheet metal shell secured interiorly of said framework, a metal plate secured on said cross-members forming a floor for said inner shell, a plurality of layers of insulating material between said body floor and said shell floor, an outer framework comprising a plurality of upstanding rectangular carline members disposed in spaced parallel relation mounting a sheet metal exteriorly thereof, a plurality of oppositely disposed bracket members secured to said chassis in offset relation thereto supporting said outer framework independently of and in spaced relation to said inner framework, and a plurality of layers of insulating material between said inner shell and said exterior shell in continuation of said first named layers of insulating material.

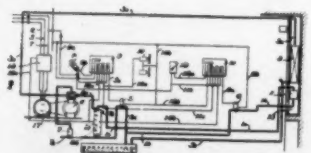
DESIGNS
170,678. COMBINED WATER COOLER AND FAN. Benjamin Glensfield, Baltimore, Md.



The ornamental design for a combined water cooler and fan, as shown.

Week of November 3

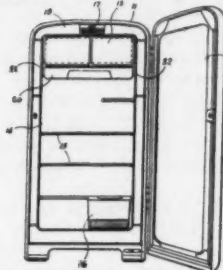
2,657,543. METHOD AND APPARATUS FOR MAINTAINING TEMPERATURE AND HUMIDITY CONSTANT. Theophil Eichmann, Bern, Switzerland, assignor to George B. Scarlett, Kennett Square, Chester County, Pa. Application Oct. 8, 1948, Serial No. 53,394. 7 Claims. (Cl. 62-4.)



1. A system for maintaining constant the temperature and the humidity of a space to be conditioned comprising, in combination, a refrigerating machine including, a refrigerant compressor, a liquid-cooled condenser, and a refrigerant evaporator in heat transfer relation with the space to be conditioned; an air-cooled condenser in heat exchange relation with the space to be conditioned and being connected in parallel with said liquid-cooled condenser; means for controlling the discharge of condensed refrigerant from said liquid-cooled condenser; means for cutting in and rendering active said air-cooled condenser to cause said compressor to function as a heat pump with said air-cooled condenser; temperature control means in the space to be conditioned in operative relation with said means for cutting out said liquid-

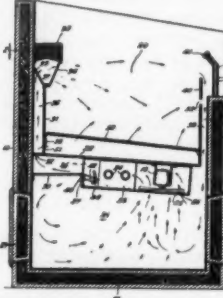
cooled condenser; and humidity controlled means in the space to be conditioned in operative association with said means for cutting in said air-cooled condenser.

2,657,544. REFRIGERATOR TRAY. Harold C. Mather, Elmwood Park, Ill., assignor to Admiral Corp., Chicago, Ill., a corporation of Delaware. Application March 7, 1950, Serial No. 148,109. 6 Claims. (Cl. 62-89.)



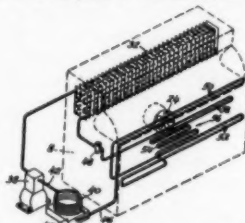
1. A refrigerator comprising a cabinet, a freezer compartment disposed in the top of said cabinet, a drawer disposed in said cabinet beneath said compartment, said drawer being adjustable vertically in said cabinet to be held in close juxtaposition to said compartment, and being insulated to allow frozen foods to be stored therein, and deflection means mounted in said cabinet adjacent the lower edges of said freezer compartment adapted to deflect cold air currents into said drawer.

2,657,545. REFRIGERATED DISPLAY CASE. Verne C. Knight, Michigan City, Ind., assignor to Betz Corp., Hammond, Ind., a corporation of Indiana. Application June 13, 1950, Serial No. 167,833. 13 Claims. (Cl. 62-89.5.)



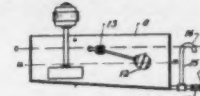
1. A refrigerated display case having an upper open-top compartment and a lower enclosed compartment, vertical walls forming said compartments and a horizontal partition separating said upper and lower compartments, a refrigerating unit disposed in said lower compartment adjacent said partition, said refrigerating unit having a relatively small vertical dimension so that it extends only in the upper portion of said lower compartment, duct means defining a cold air passage extending in said upper compartment adjacent one of said vertical walls and communicating with said refrigerating unit, duct means defining an exhaust air passage in said upper compartment adjacent the vertical wall opposite to said one wall and communicating with said lower compartment, said refrigerating unit having an intake portion communicating with said lower compartment, a discharge portion communicating with both said cold air passage and said lower compartment, and means for drawing air into said intake portion and discharging the same from said discharge portion, whereby first and second paths for refrigerated air are individually provided through said upper and lower compartments.

2,657,546. SNOW ELIMINATOR FOR SELF-SERVICE CASES. Victor W. Smith, Trenton, N. J., assignor to C. V. Hill & Co., Inc., Trenton, N. J., a corporation of New Jersey. Application July 2, 1951, Serial No. 234,384. 2 Claims. (Cl. 62-89.6.)



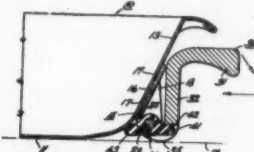
1. A refrigerated display case having a display space which is open at the top for access to customers, means presenting surfaces forming an air duct located in heat exchanging relation with said display space and leading from an air inlet adjacent the top of said display space to a blower, thence to an evaporator and back to the display space, a compressor for supplying refrigerant to said evaporator and a conduit carrying compressed and relatively warm refrigerant from the compressor to the evaporator and passing first into heat exchanging relation with said surfaces adjacent said air inlet for raising the temperature of said surfaces and thereafter passing into heat exchange relation with surfaces adjacent said blower for reducing the tendency for snow and ice crystals to accumulate thereon.

2,657,547. AUTOMATIC SEDIMENT PURGER FOR TUBE ICE MACHINES. Henry V. Heuser, Louisville, Ky., assignor to Henry Vogt Machine Co., Louisville, Ky., a corporation of Kentucky. Application May 29, 1950, Serial No. 164,875. 4 Claims. (Cl. 62-107.)



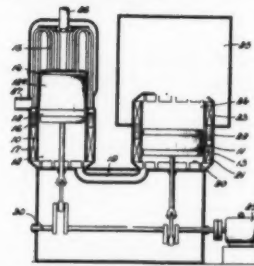
1. In a tube ice-making machine: a freezer providing tubes subject to alternate freezing and thawing temperatures and through which water to be frozen is passed; a water supply tank providing a low point to which sediment gravitates; means connected to a higher point in the tank for pumping water from the supply tank to the tops of the freezer tubes whereby during the freezing period a quantity of water is maintained in suspension; means controlled by the level of water in the tank for replenishing water in the tank to a predetermined level; means for stopping flow of water to the freezer tubes during the thawing cycle whereby the suspended water returns to the tank to raise its liquid level therein; and an overflow pipe having a bend positioned between said predetermined level and raised level connected to said low point of the tank to purge settled solids therethrough and to limit siphoning of water to the level of said bend.

2,657,548. FREEZING PAN. Arthur J. Frel, Sr., Dayton, Ohio, assignor to General Motors Corp., Detroit, Mich., a corporation of Delaware. Application June 29, 1951, Serial No. 234,314. 3 Claims. (Cl. 62-108.5.)



1. A freezing pan having an end wall, a handle for said pan pivoted to said end wall on a horizontal pivot pin located adjacent the bottom portion thereof, said handle having a lower cam portion so arranged as to press down upon a horizontal supporting surface for said pan when the upper portion of said handle is swung outwardly from said end wall to forcibly lift said pan from said supporting surface, and a resilient rubber bar mounted upon said pivot pin and extending transversely thereof, said bar having its two opposed ends pressing against said pan and said handle respectively in such manner that said handle is at all times yieldably urged inwardly toward said end wall to a generally upright position whereat said cam portion lies above said flat supporting surface.

2,657,552. HOT GAS ENGINE REFRIGERATOR. Cornelius Otto Jonkers and Jacob Willem Laurens Kohler, Eindhoven, Netherlands, assignors to Hartford National Bank and Trust Co., Hartford, Conn., as trustee. Application April 17, 1951, Serial No. 221,366.



1. A closed system refrigerator having an amount of gas of invariable chemical composition as the working medium comprising at least two displacers adapted to move with a substantially harmonic motion and with a constant phase difference in relation to each other, each of said displacers being provided with two working surfaces, one working surface of one displacer defining one end of a hot space and acting upon a volume of gas in said hot space, the other working surface of said one displacer defining one end of a space of intermediate temperature and acting upon a volume of gas of intermediate temperature, one working surface of the other displacer defining the other end of said space of intermediate temperature and acting upon a volume of gas of said intermediate temperature, the other working surface of said other displacer defining one end of a cold space and acting upon a volume of gas in said cold space, the variations in volume of gas in hot space leading in relation to the variations in volume of gas in said cold space, the sum of said volumes being substantially constant, said hot space communicating with said space of intermediate temperature by means of a heater, regenerator and cooler, and said cold space communicating with said space of intermediate temperature by means of a freezer, regenerator and cooler.

(To Be Continued)

AVAILABLE FOR LICENSING

Amana Refrigeration, Inc. offers the following patent for non-exclusive licensing on reasonable terms. Applications for licensing may be addressed to Amana Refrigeration, Inc., Amana, Iowa.

Pat. No. 2,622,911. Refrigerator Cabinet Latch Strike. Patented December 23, 1952. Refrigerator cabinet latch strike having completely concealed mounting means for adjustment horizontally and inwardly and outwardly so that it will always be in proper alignment with the door to provide a tight seal. The exposed portion of the latch strike, which is especially pleasing in appearance, comprises a tubular shank forming a hook for cooperation with a latch mechanism embedded in the door.

KEY TO PROFITS



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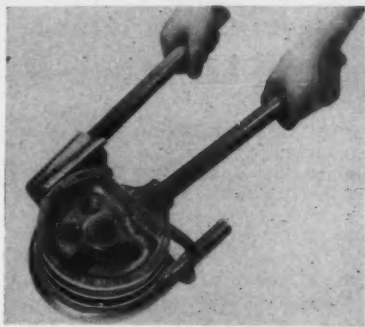
Name

Company

Street

City Zone State

2-15-54



Lightweight Tool Bends Hard, Soft Copper Tubing

MILWAUKEE—A lightweight tool, weighing only 6 lbs., for bending hard and soft copper tubing in the sizes of 1/8 and 3/8 in. o. d. (1/8 and 3/8 in. nominal), has been announced by Tal Bender, Inc. here.

Called the model TT-57, the tool has only two parts, a forming base and a pulling section. Both bending sizes are in the same tool and have the same 3 in. radius to give a neater looking job in parallel runs, the manufacturer said.

The round base forming section has two grooves to which hooks are attached to fasten the tubing. The tubing is formed in the grooves around this forming section, which is calibrated in 45° increments. The forming section is attached to a handle.

The pulling section, also with two grooves, is pulled with a handle against the tubing and around the forming section.

The two pipe handles (which are not included with the tool) are two pieces of regular 3/4-in. pipe not more than 35 in. long.

The tool is priced at \$26.40.

Control Systems Bow at Norge Service Meetings

CHICAGO—Product servicing of the new "Customatic" refrigerator-freezer combinations, and new "Time-Line" clothes dryer models are being outlined to distributor service personnel during February by Norge Div. of Borg-Warner Corp.

Also, replacement stock and chassis inventory control systems are being introduced during the annual national service meetings. One meeting was held Feb. 10-12 in Muskegon, Mich.; others are scheduled for Feb. 18-19 in New Orleans and Feb. 25-26 in San Francisco.

A complete review of distributor service operating methods and practices are featured in a forum for service managers during the meetings.

According to E. G. Fenton, Norge national service director, the factory-sponsored stock inventory control system will provide distributors with an adequate replacement parts stock direct from the factory.

5 Department Heads Named By Ruslander Enterprises

BUFFALO—Harold S. Ruslander, president of Ruslander Enterprises, has announced the appointment of five department heads.

They are: George E. Frost, sales manager; Edward R. Helmke, production manager; Marie A. Wittman, contract manager; William Krombein, procurement manager; and James Carney, chief engineer.

Ruslander Enterprises consist of Ruslander & Sons, Jewett Refrigerator Co., Russell & Watson, and The George A. Ray Mfg. Co.



PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

It is not necessary to refer solely to the issuing office for additional data on a bid invitation issued by any of the following U. S. Army Ordnance Offices: Ordnance Tank Automotive Center; Detroit Arsenal; Frankford Arsenal; Picatinny Arsenal; Raritan Arsenal; Ordnance Ammunition Center, Joliet, Ill.; Rock Island Arsenal; Springfield Armory; Watertown Arsenal; and Watervliet Arsenal.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Purchasing and Contracting Officer, Redstone Arsenal, Huntsville, Alabama			
Fan, ventilating, roof up-blast, 22-220 c.f.m., 42 in. non dash spark blades, explosion proof.	2 ea.	(ORD-01-021-54-211)	26 Feb 54
Fan, ventilating, roof up-blast, 37-150 c.f.m., 48 in. non dash spark blades, explosion proof.	19 ea.	(ORD-01-021-54-211)	26 Feb 54
Fan, centrifugal, 31-806 c.f.m., explosion proof.	2 ea.	(ORD-01-021-54-211)	26 Feb 54
Officer in Charge, Navy Purchasing Office, Los Angeles, Calif.			
Temperature conditioning equip., 3 cabinets with nominal temperatures of 140° F., 70° F. and -60° F., complete with heating, cooling and water treatment equipment, air blowers and ducts and controllers and recorders. Entire unit to be furnished and installed by contractor at NANT Sealbach, California.	Lot	11179Q	1 Mar 54
General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.			
Cooler, complete, self contained, electrically operated unit, bubbler drinking water, Shore type, cabinet top provided with basin, drainage facility and one bubbler, Inf. Fed. Spec. OO C 00566B (GSA FSS).	150 ea.	3-1869B	24 Feb 54
Corps of Engineers, New England Division, U. S. Army, 857 Commonwealth Ave., Boston, Massachusetts			
Construction of Additional	Job	(ENG-19-	11 Mar 54

Government Contracts

Cold Storage Facilities in Existing Storehouse Building T-105-DOW Air Force Base, Bangor, Me., Plans and Specs. Avail. Approx. 11 Feb. 54. Deposit Required \$10.00. Commanding Officer, Fort Lawton, Washington
Replacement of warm air furnaces, Ft. Lawton, Wash. Job 20278/54Q 10 Mar 54

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, 19th & F Sts., N.W., Washington 25, D. C.			
Additional Air Conditioning apparatus in the General Accounting Office Building, Washington, D. C.	Job	49-029-1	(On or About) 9 Mar 54
The work consists of furnishing and installing 2 additional central air conditioning units, automatic dampers and heating coils—altering one present central air conditioning unit by relocating one fan and adding two others—and making necessary duct changes to present system.			

U. S. DEPARTMENT OF COMMERCE

U. S. Weather Bureau, Washington 25, D. C.—Attn: Chief, Procurement and Supply Section
Indicator, humidity electrical hygrometer type. 5 ea. 74-WB-54 23 Feb 54

U. S. DEPT. OF HEALTH, EDUCATION, AND WELFARE

Public Health Service, National Institutes of Health, Bethesda, Maryland
Centrifugal refrigerated portable. 1 356 15 Feb 54

CONTRACTS AWARDED THROUGH FEB. 8

War Department, United States Engineer Office, P.O. Box 905, Charleston, South Carolina
Construction of Cold Storage Warehouse, Charleston Air Force Base, Charleston, S. C. (Invitation No. ENG-38-081-54-12.—Job, \$60,837.—Thompson Construction Co., P.O. Box 413, Charleston, S. C. Prime contractors has subcontracts open for the following: Roofing and Sheetmetal, Refrigeration, Painting, Plumb-in, Electrical, Insulation.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" \$7.50 per insertion. Limit 50 words. 15¢ per word over 50.

RATES for all other classifications \$10.00 per insertion. Limit 50 words. 20¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

SALES ENGINEER, for past 10 years assistant manager with a wholesale distributor. Extensive experience in the heating and air conditioning field, capable of engineering, estimating, and selling; dealer experience, 42 years old. Looking for a position in the west or southwest. Available immediately. BOX 4509, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

FACTORY REPRESENTATIVES. To handle most complete line in the industry: Commercial refrigerators, freezers, display cases, walk-ins. Promotionally-priced for volume sales. Some excellent territories available. If you have a proven record of good sales performance, write to President, FOGEL REFRIGERATOR COMPANY, Phila., 37 Pennsylvania.

FIELD MAN wanted for N. Y. C., contacting dealers for one of country's largest manufacturers of commercial refrigerators. Excellent opportunity for experienced, hard-working wholesale man. Salary and bonus basis. Should reside in greater N. Y. Write present and past connections, age, and other details. JORDON REFRIGERATOR COMPANY, 58th and Grays Avenue, Philadelphia.

MANUFACTURER'S REPRESENTATIVES wanted to call on commercial refrigeration dealers, restaurant equipment companies, beer wholesalers, and breweries to sell a complete line of commercial beer dispensing and bottle cooling equipment. Can handle allied but non-conflicting lines. Territories available in states of Pennsylvania, Louisiana, Mississippi, and Alabama, and the Northwest states. Write PERLICK BRASS COMPANY, Manufacturers, 3110 West Meinecke Ave., Milwaukee, Wisconsin.

FACTORY REPRESENTATIVES: Major manufacturer of complete line of ceiling suspended coils, air conditioning coils, and evaporative condensers has openings in several areas for factory representatives. Submit resume of personal and business qualifications to: BOX 4461, Air Conditioning & Refrigeration News.

SALES ENGINEER wanted by well-established Ohio refrigeration wholesaler. Must be able to sell air conditioning, industrial and commercial equipment, and supplies. Graduate engineer preferred. Excellent opportunity for qualified man. Car furnished. Salary and bonus. In reply, state qualifications, experience, and salary desired. BOX 4506, Air Conditioning & Refrigeration News.

EQUIPMENT WANTED

WE NEED a total of 75 hp. in two, three, or four machines for Freon or ammonia, with unit coolers to match for 33 degree room, preferably water defrost. Will consider anything which can be adapted to our use. Write BOX 1027, Station "A", Green Bay, Wisconsin.

EQUIPMENT FOR SALE

MAGNETIC FLASHLIGHT holder—Allows flashlight to be held at most any angle, made possible by its universal swivel joint. Can be used on any iron or steel surface, be it round or flat or curved. An indispensable tool for the repairman. Only \$1.25 for sample prepaid. Send cash, check, or money order to M. E. COLLINS, 2120 N. 12th St., Milwaukee 5, Wisc.

1/4 AND 1 hp. nationally-known compressors at sacrifice prices (manufacturer prohibits us from using name). All twin-cylinder bodies with flywheel and service valves—1/4 hp. only \$42.00; 1 hp., \$47.00. (10% discount in lots of 6). Latest model General Electric fan-cooled hermetic units, 1/4 hp., \$34.00; 1/2 hp., \$37.00. Also, Tecumseh model S68L fan-cooled units, only \$34.00. All equipment new and fully guaranteed. MANN REFRIGERATION SUPPLY COMPANY, 440 Lafayette Avenue, New York City; or phone GRamercy 3-8000.

APPROXIMATELY 300 new, unused 1/2 hp. Frigidaire units, charged with Freon 12, control and blower type evaporators. Packed 3 to a crate, \$45.00 in lots of 3. Quantity prices available on request. All types parts, fittings, and controls available. REFRIGERATION TRADING COMPANY, 334 Canal Street, New York 13. Walker 5-2073.

ATTENTION SERVICEMEN: Send for our refrigeration parts and supplies catalog. Save up to 50% on many items. Relays, V belts, T.X. valves, fittings, controls, driers. New—guaranteed merchandise. WALTER W. STARR REFRIGERATION, 2833 Lincoln Avenue, Chicago 13, Illinois.

3 NEW General Electric 5 hp. water cooled condensing units with motors, 208 volt, 3 phase, 60 cycle, Model VW5AX-10A, and one new Acme 7 1/2 hp. chiller, Model RC87D. All priced below distributor's cost. Iceberg freezer lockers, new and used, at sacrifice prices. TALBERT-THOMAS COMPANY, 321 East Grand, Chicago.

COLLECTION METERS for sales—new and used. Available in quantity, at greatly reduced prices. BOX 4479, Air Conditioning & Refrigeration News.

ACME RC3 chiller. Original crate. Brand new. One-day shipment. Reply: BOX 4504, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

ESTABLISHED COMMERCIAL refrigeration and air conditioning sales and service business, 1,664 sq. ft. floor space, lot 60' by 125'. Tools, fixtures, and adequate auto equipment. Frigidaire commercial franchise. Ideal climate and suburban location. Property and complete business, \$17,500.00, terms. Contact TREESE REFRIGERATION, P. O. Box 554, Tulare, California. Phone 6-9178.

SEEKING PARTNER—to establish and manage enterprise for selling, installing, and servicing air conditioning, heating, and irrigation equipment. Applicant must have engineering degree, and experience in air conditioning and heating field. No capital necessary. Address "WEATHER-MAKERS", P. O. Box 104, Lebanon, Missouri.

A&P Tests Full Line of Frozen Meats in Maine

SOUTH BERWICK, Me.—A full line of frozen meats is being merchandised on a test basis in an A&P store here.

The line consists of some 30 different items bearing the L. B. Darling Co. label. The meats are displayed in a 14-ft., open-type, self-service case.

A&P reportedly is considering further experimentation with the idea in a number of its largest supermarkets in the New England area.

If results of the tests are satisfactory, first full-scale use of the frozen-meat line probably would be in smaller stores where complete meat departments are impractical.

The line would give such stores a competitive line of red meats and occupy a relatively small amount of space.

Some of the objectives of the tests are to determine the best type of packaging, size of packages, location of display case, and size of case.

Ansul Promotes Brelie to Gov't Relations Manager

MARINETTE, Wis.—Ansul Chemical Co. has announced the appointment of George Brelie as government relations manager, in charge of the sale of all Ansul products to the government.

Brelie, who formerly was in charge of Ansul's Fire Equipment Sales branch office in Oakland, Calif., has been with the company since 1949.

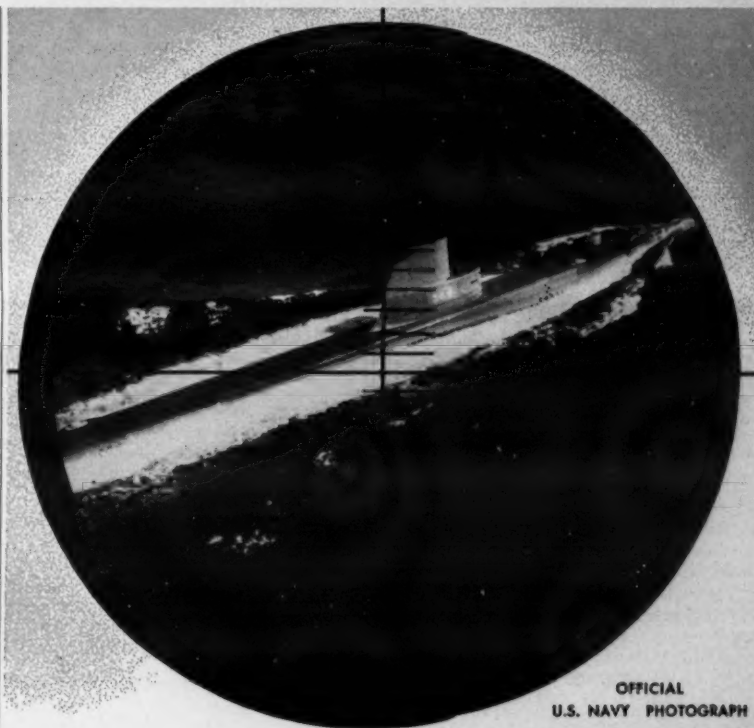
He will be succeeded in Oakland by Joe Holmes, formerly Los Angeles district manager. Holmes' place in Los Angeles was assigned to Remsen Paul, who was transferred from Philadelphia.

The company also announced that Ed Bader, formerly with Fire Equipment sales in Chicago, will be transferred to New York in charge of contacting national accounts for all products.

Commercial Distributors To Represent Servel In Maine

EVANSVILLE, Ind.—Commercial Distributors, Portland, Me., has been appointed Servel appliance distributor for Maine and northern New Hampshire, according to James F. Donnelly, vice president in charge of sales for Servel, Inc.

Herbert S. Holmes, Sr. is president and general manager of Commercial Distributors, which has a branch at Bangor, Me. Herbert S. Holmes, Jr. is vice president; John P. Holmes, assistant treasurer; Gerry Lord, sales manager; and Don Emmons, service manager.



OFFICIAL
U.S. NAVY PHOTOGRAPH

COOL DRINKING WATER UNDER THE SEA

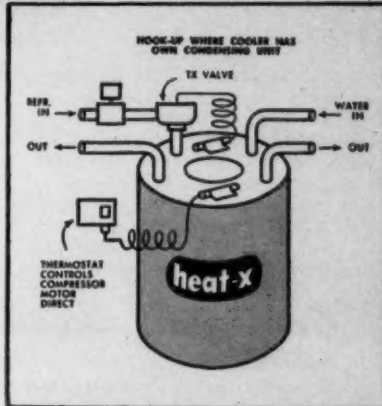
There's plenty of it for men aboard the U.S. Navy's new and re-conditioned submarines.

Typical is the "Diodon" shown above. Aboard this sub, a Heat-X cast aluminum water cooler chills ample quantities of drinking water to supply officers and crewmen. The unit, connected into the ship's refrigeration circuit, has a cooling capacity of 15 gallons per hour. The cooler is installed in an insulated housing and is equipped with suitable Navy-type controls.

Whatever the special problems of your next liquid chilling installation, check with Heat-X-Changer Co. . . . heat transfer products by heat transfer engineers.

WRITE FOR FREE ILLUSTRATED BULLETIN ON THIS OR OTHER HEAT-X PRODUCTS.

THE HEAT-X-CHANGER CO., Inc.
BREWSTER - NEW YORK



Deepfreeze Sponsors Servel Net Sales \$100,000 National Reach Record High for '53 Consumer Contest

CHICAGO—Aimed at providing Deepfreeze appliance dealers with high store traffic and detailed lists of qualified prospects for their 1954 selling, a \$100,000 national consumer contest sponsored by Deepfreeze Appliance Div., Motor Products Corp., gets under way Feb. 15.

The contest, offering prizes of appliances, will be heralded and promoted by some 3,800 billboards in 100 key markets and about 40 miles apart on main highways, radio messages by Commentator Gabriel Heatter over 540 stations of the Mutual Broadcasting System beginning Feb. 11, and local newspaper advertising.

"Since there will be prizes for every distributor territory and every state, in addition to the national prizes, the contest is sure to make a strong appeal in dealers' stores," commented F. F. Duggan, Deepfreeze vice president and general manager.

DEALER KITS DESIGNED FOR TIE-IN

To tie in with other promotional support, dealers will have their own special kits, including newspaper ads, colorful window banners and streamers, a full-color reproduction of the contest billboard in window display size, label buttons, postcard reminders, and contest brochures. Contestants will go to dealers' stores to get entry blanks and to submit entries.

Each entry blank submitted will supply the dealer with the following valuable information: A prospect's name and address; preference of Deepfreeze appliance; preference of an appliance feature; ownership and age of present refrigerator or freezer; ownership of room air conditioner; and appliances, in order of preference, which prospect would like to buy in the next two years.

Entries will be judged on the basis of telling in 25 words or less why the contestant likes a particular feature of a Deepfreeze refrigerator, home freezer, or room conditioner. The contest will run from Feb. 15 to April 1, in the United States and Canada.

FOUR APPLIANCES OFFERED AS FIRST PRIZE

First among 15 national prizes will be four 1954-model Deepfreeze appliances—an "Imperial" 14-cu. ft. home freezer, and Imperial 11-cu. ft. refrigerator with "Aqua-Tap" beverage dispenser on the door, a deluxe double-oven electric range, and an Imperial ½-ton room air conditioner with thermostat and heater—plus enough food to fill the freezer, for a total retail value of \$1,765.

Second prize will consist of the freezer filled with food, the refrigerator, and the air conditioner; third prize, the freezer and the refrigerator; and the next 12 prizes, an Imperial 8-cu. ft. home freezer and an Imperial 9.6-cu. ft. refrigerator.

Each of the 200 regional prizes, which comprise the awards covering every state and distributor's territory, will be the winner's choice of the 14-cu. ft. freezer, the Aqua-Tap refrigerator, or the air conditioner.

Servel Net Sales Reach Record High for '53

EVANSVILLE, Ind.—Net sales of Servel, Inc. for the fiscal year ended Oct. 31, 1953 increased to a record high of \$147,586,716 from \$99,545,185 the year before, W. Paul Jones, president, and Louis Ruthenburg, chairman of the board, stated in the annual report to stockholders.

"The inevitable difficulties of putting new products in production," and establishing larger distribution outlets for new refrigeration and air conditioning lines affected net profits, the report stated, resulting in a net loss for the year—after depreciation, Federal taxes, and charge-offs—of \$1,983,511, compared with a net profit of \$1,723,648 (or 85 cents a common share) the year before.

Unamortized tool expense write-offs and inventory write-downs also affected results, the report disclosed. Commenting on the report, Jones said:

"We have dealt realistically with the readjustments that we felt were necessary in the past year, and there is good reason for believing that both Servel and the general economy are in a position to respond promptly to an improvement in business activity, signs of which are beginning to appear. Our civilian product line is styled and priced to capitalize on this improvement."

The report pointed out that commercial bank borrowings, which had reached a peak of \$8,000,000, were \$6,000,000 at Oct. 31, and have since been reduced to \$5,000,000.

Defense "V" loan borrowings reached a peak of \$25,000,000, were \$17,000,000 on Oct. 31, and have since increased to \$19,000,000, it said, "reflecting expanded defense operations in recent months. It is believed that defense aircraft activities will be continued in approximately present volume for the remainder of fiscal 1954."

Greatly expanded sales and advertising activities throughout the year did much toward earning a better acceptance for all the civilian products of the company, the report stated.

"While 1953 was largely unfavorable for the sale of household appliances, certain of the company's products proved to have substantial and unique customer appeal," the stockholders were informed.

Notably successful were the radically new Servel "automatic ice-maker" refrigerator and the portable electric "Wonderbar" refrigerette, it was noted.

Air conditioning equipment sales volume was the largest in the company's history. Total percentage of dollar increase was 238% compared to 1952.

Dr. Williams To Sell Fixtures

COLUMBIA, S. C.—Frank Williams & Sons, Inc., of Greenville, S. C., has filed articles of incorporation with the Secretary of State. The new corporation, capitalized at \$40,000, is authorized to engage in business as distributors of commercial refrigeration and store equipment. Dr. Frank Williams is president.

2 West Coast Firms Win Suit for Breach of Contract In Freezer Financing Plan

SAN FRANCISCO—Pacific Telecoin Corp. and Pacific Northern Appliances, Inc. recently won a judgment for \$34,256, \$2,500 in counsel fees, and costs as a result of their suit charging defendants with breach of contract on sales of home freezers in a financing plan.

Defendants were Albert S. Samuels Co., Samuels Home Service Co., and Albert S. Samuels Co., trading as Dollarwise Food Plan. They were accused of failing to comply in a financing program arranged by the plaintiffs with the Bank of America.

The judgment was awarded by Superior Court Judge George W. Schonfeld.

Suit Alleges Patent On 'Conduit' System Infringed

GREENSBORO, N. C.—York Corp. was named defendant with the Jefferson Standard Life Insurance Co. as co-defendant in a suit for patent infringement brought Feb. 10 by Carrier Corp. in the United States District Court here.

The suit alleges infringement of U. S. Patent 2,363,294 held by Carrier Corp. covering the "Conduit Weather-master" system of air conditioning for large buildings.

The installation which allegedly infringes the patent in question is in a building owned by the Jefferson Standard Life Insurance Co., which has headquarters in Greensboro.

Put Store's Frozen Food Storage Space at 10 Ft.

CHICAGO—The average food store in the United States is apt to have about 10 lineal feet of frozen food cabinet, according to W. L. Pavlovski, general manager of Beatrice Foods Co.'s Frozen Food Div.

Speaking to wholesalers attending a meeting of the Central States Frozen Food Association, Pavlovski explained that he included all the "Mom and Pop" food stores handling frozen food in arriving at this figure.

By the same yardstick, the average weekly frozen food order of U. S. retailers may not be much more than \$20-\$25, he estimated.

Pavlovski took part in a panel discussion on selling problems. Another panel member, Tom Gould of Lafayette Foods, Inc., Lafayette, Ind., noted that distributors are at last getting adequate case space in the new, larger supermarkets. He pointed out that one new supermarket in a town of 30,000 has 80 ft. of frozen food cases.

NAFC To Report on Trends In Frozen Food Equipment

WASHINGTON, D. C.—The second 1954 management clinic of the National Association of Food Chains will be held March 15-16 at the Edgewater Beach hotel in Chicago with presentation of a report on the third NAFC survey of trends in frozen food sales and equipment in chain food stores as one feature.

A preview of "What the Produce Department Will Look Like in 1960" is also scheduled for the clinic.

Nash-Kelvinator Earnings, Sales Decline In Quarter

DETROIT—Net earnings of Nash-Kelvinator Corp. in the three months ended Dec. 31, 1953, the first quarter of the 1954 fiscal year, were \$954,893, or 22 cents per share, compared with \$5,522,374, or \$1.27 per share, in the like period last year, George W. Mason, president, reported recently.

Mason attributed the decline to lower production of automobiles and appliances, reduced prices, and to a shut down for model change-over.

Sales of military aircraft engines were sufficiently ahead of a year ago to almost wholly offset reduced sales of cars and appliances, Mason said.

He pointed out, however, that profit margins on government business are smaller than on standard commercial products and that higher sales of airplane engines therefore failed to compensate for lower car and appliance volume.

Nash-Kelvinator's net sales for the December, 1953, quarter were \$108,634,874 against \$111,332,809 in the corresponding quarter a year ago.

RTA Plans 2nd Convention In Richmond Feb. 26-28

WASHINGTON, D. C.—The Refrigeration Trade Association of America will hold its second convention at the John Marshall hotel in Richmond, Va. on Feb. 26-28.

In addition to the regular educational and RTA business meetings scheduled, exhibits will emphasize "refrigeration in defense."

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